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Cross my heart, and hope to get away with it

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Politics this week

Sep 19th 2002
From The Economist print edition

Saddam under pressure

In response to American threats, and tough pressure from its fellow Arabs, **Iraq** said the UN's weapons inspectors could return to Iraq, without conditions. Talks between Iraq and the UN began immediately. The United States, expressing scorn for the offer, said it would press for a new Security Council resolution. Some other countries said there was no need.

See article: Iraq and the Arab world

Ramzi bin al-Shibh, one of **al-Qaeda's** leaders, was arrested in Pakistan and flown to the United States. The FBI also arrested half a dozen alleged members of an al-Qaeda cell in Lackawanna, a steel town in New York state.

AP

See article: A breakthrough

Janet Reno finally conceded the Democratic nomination for governor in **Florida** to Bill McBride, after a week of delay due to complaints about voting procedures. Meanwhile, in **Massachusetts** Shannon O'Brien won the Democratic gubernatorial primary; she now faces the Republican candidate, Mitt Romney.

See article: Year of the woman?

Persson in charge

Sweden's ruling Social Democrats, led by the prime minister, Goran Persson, easily won a general election, scoring nearly 40% of the votes against 15% for the main right-wing party, the Moderates. The populist Liberals took third place, tripling their vote to 13%, partly thanks to a controversial suggestion that immigrants should pass a Swedish-language test.

See article: Sweden's Social Democrats win again

Ahead of **Germany's** general election on September 22nd, polls put the Social Democrats, led by the chancellor, Gerhard Schröder, just in front of his main conservative challengers, led by Edmund Stoiber, but the shape of a new government may depend on the performance of three smaller parties.

See article: Germany's close-fought election

After a general election in strife-ridden **Macedonia**, a coalition of moderate Slavs and the more nationalistic of the two main ethnic Albanian parties prepared to replace a government led by the more nationalist Slav party.

See article: A better new government for Macedonia?

The **Georgian** government, under threat of military action from Russia, insisted that Russians and Americans were already co-operating to pacify the lawless Pankisi Gorge, in the northern part of the country abutting Chechnya, and root out rebel Chechens using the territory for refuge.

See article: Russia threatens Georgia

French police nabbed two top leaders of the **Basque** separatist terror group, ETA, in a suburb of Bordeaux. The Spanish government hailed the arrests as a blow against terrorism.

The **Irish** government suffered the embarrassment of having to drop a controversial but longstanding plan, known informally as the "Bertie Bowl" after the prime minister, Bertie Ahern, to build a stadium on the edge of Dublin.

Lula edges ahead

Brazil's currency and its bonds slipped again, as Luiz Inacio Lula da Silva, the left-wing front-runner for next month's presidential election, increased his lead in the opinion polls over Jose Serra, the government candidate.

See article: Brazil for Lula?

Trade unions in **Colombia** held a one-day strike against public-spending cuts and labour and pensions reforms planned by the new government of President Alvaro Uribe.

See article: Strengthening Colombia's security forces

Cuba said that it would sign the Nuclear Non-Proliferation Treaty and ratify the Treaty of Tlatelolco, under which the countries of Latin America and the Caribbean have renounced nuclear weapons.

Dozens of people were injured when police broke up a demonstration by several thousand protesters calling for the resignation of **Paraguay's** president, Luis Gonzalez Macchi. Further protests are planned.

Reuters

The right road?

The so-called **quartet** (America, Russia, the EU and the UN) which is exploring possible solutions to the Palestinian-Israeli conflict offered a three-phase "road map": Palestinian reform and elections, plus Israel's withdrawal to positions it held two years ago; the creation of a "provisional" Palestinian state; and Israeli-Palestinian talks leading to a final agreement in 2005.

Suicide bombers struck twice at **Israel**: first in northern Israel, killing a policeman; second in Tel Aviv, killing at least five people and wounding many more.

Corruption costs Africa almost $150 billion a year, according to a report from the African Union. This figure, which includes direct costs (money stolen or extorted) and indirect ones (investment scared off), is about 25% of Africa's GDP.

Rwanda started pulling some of its troops out of eastern Congo, as part of a peace pact signed with Congo's government in July.

Nigeria's electoral commission suspended voter registration in parts of four states where ethnic and religious fighting had made it difficult. A commission reported that riots in one of the states last year had killed 915 people—twice previous estimates.

Soldiers and mutineers fought in Abidjan, the capital of **Côte d'Ivoire**, before dawn on September 19th. Diplomats said that Robert Guei, a former military ruler, was killed, but the government said the situation was under control.

Bullets and ballots

Election violence continued in Indian-administered **Kashmir** as Islamic militants killed two ruling-party activists in Srinagar. But Indian officials said that turnout for the start of voting, which takes place in stages until October, was high.

The ground-breaking visit by Japan's prime minister, Junichiro Koizumi, to **North Korea** prompted an apology from Kim Jong Il, the North Korean leader, for the abduction of 12 Japanese civilians during the 1970s and 1980s. Japan had demanded answers over its missing citizens as a pre-condition for talks on normalising relations between the two countries.

EPA

See article: In from the cold?

After historic talks in Thailand between **Sri Lankan** officials and the separatist Tamil Tigers, Anton Balasingham, a rebel negotiator, clarified his group's long-term aim by stating that they would settle for autonomy for minority Tamils rather than a separate state.

See article: The Tigers talk peace

Afghan authorities arrested a senior Taliban official and three of his aides in the southern province of Kandahar. All four were handed over to American forces in the city.

At least 38 people died in a mass-poisoning near Nanjing in **China**. Police blame a rival shopkeeper.

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Business this week

Sep 19th 2002
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Sweet retreat

The trust controlling **Hershey Foods** decided not to share its sweets. Caving in to political pressure and public outcry centred on the company town in Pennsylvania, it abandoned plans to auction Hershey, America's biggest confectioner, for around $12 billion.

See article: A company town's Pyrrhic victory

Investment Bank

The **Bank of Japan** stunned the markets by announcing that it planned to prop up the country's ailing banks by buying shares directly from them in a bid to stabilise the financial system. The dwindling value of Japan's stockmarket has reduced the banks' capital as they struggle to write off their vast bad debts. Observers wondered how close to disaster the banks really are.

See article: Shareholder of last resort

Lukas Mühlemann agreed to step down as chairman and chief executive of **Credit Suisse** in December, so deciding the succession at the top of the Swiss bank. Walter Keilholz, head of Swiss Re, will become chairman; Oswald Grübel and John Mack will slug it out as joint CEOs.

Shares in **J.P. Morgan Chase** plunged by 5% after the American investment bank gave warning that bad loans to telecoms companies and falling trading revenues would dent its third-quarter profits.

Asbestos pay-outs hit another European insurer. **Allianz**, a German giant, was forced to give $750m to an American unit to cover asbestos-related claims. Its shares sagged as investors feared that it will join the queue of insurers proferring a begging bowl to secure fresh capital. Swiss Life was the latest to hold out its hand after announcing a first-half loss of SFr386m ($236)—it wants SFr1.2 billion.

See article: Asbestos litigation looks endless

The woes of Europe's insurers and general worries about the state of the world economy hit **European stockmarkets**. The FTSE 100 fell by 4% in one day, Germany's DAX fell by 5% to a five-and-a-half-year low. Other markets followed suit.

OPEC agreed to keep tight production quotas despite winter and a war in Iraq looming. Oil prices seem likely to rise.

Executive perking

Dennis Kozlowski, a former CEO of Tyco International, and two other top executives were charged with fraud. Its alleged extent? Unauthorised payments to employees of nearly $100m. Mr Kozlowski is also said to have improperly spent company funds on personal luxuries including a dog umbrella stand costing $15,000, $2,900-worth of coat-hangers and a notebook at a more modest $1,650.

America's Securities and Exchange Commission began an “informal investigation” into **General Electric's** accounting treatment of a generous retirement package awarded to Jack Welch, even though

the company's former boss agreed to forgo many of the benefits to protect GE's reputation.

See article: Jack Welch's outrageous employment contract

The mood of accounting rectitude sweeping America failed to overwhelm Silicon Valley. A distinguished commission made up of business grandees endorsed the costing of **stock options** on company books—save one man. Andrew Grove of Intel, the chip-making behemoth, spoke for many among America's tech elite, saying that the move will merely punish firms that distribute options widely—ie, the inhabitants of Silicon Valley.

Phone votes

MobilCom had the good fortune to face bankruptcy a week before Germany's general elections. Gerhard Schröder, chancellor for the time being, announced a vote-courting bail-out to the tune of some *euro*400m ($391m) for the beleaguered mobile-phone operator. It was still said to have plans to axe a third of its staff of 5,500, which could prompt the government to withdraw the lifeline.

Deutsche Telekom may profit from the ills of Elektrim, a Polish company that owns 51% of the country's leading mobile firm (with Vivendi Universal). DT's 49% stake may allow it to snap up the rest at a knock-down price.

See article: Another fine mess for Polish capitalism

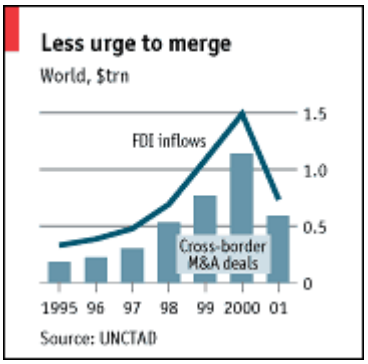
Harvey Nichols, an upmarket British designer-goods store much favoured by “ladies who lunch”, is to return to private hands. Dickson Poon, the shop's owner, offered to buy back a 49.9% stake for a less than luxurious £2.50 ($3.80) a share, a little less than the offer price in 1996.

Scientists at CERN, a particle-physics laboratory in Switzerland, announced the creation of 50,000 anti-hydrogen atoms. It is the first time that **atomic anti-matter** has been made in such bulk. Not quite enough to power the starship *Enterprise*, though.

Foreign indifference

Foreign direct investment fell by 51% in 2001 to around $735m, the biggest decline for over 30 years according to the *World Investment Report*. Despite the sudden waning of the cross-border merger frenzy, America still remains the biggest recipient of FDI with inflows of $124 billion.

See article: Foreign direct investment



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Saddam under pressure

Hoping to get away with it

Sep 19th 2002
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Don't let him

Get article background

THE past week has been good for President George Bush and bad for President Saddam Hussein. Mr Bush's stirring and well-crafted speech to the United Nations General Assembly on September 12th convinced many other countries, most notably other permanent members of the Security Council, to support the idea of new resolutions laying down the world's demands on Iraq. Arab countries that had been widely assumed to oppose a war on Iraq in almost any circumstances suddenly changed their minds, saying that, well, if the UN were to be behind a war then yes, of course American and other forces could use bases on their territory. Given all that, it is hardly surprising that Mr Hussein then performed a somersault, dropping his previous absolute rejection of any idea that UN weapons inspectors should return to his country after their four-year exclusion, and sending a short letter saying that inspectors could return after all. Even dangerous dictators have survival instincts.

What has been surprising—or, rather, dispiriting—has been the reaction to Mr Hussein's somersault by many western commentators and some western governments. Plainly, the reason why Mr Hussein has changed his mind is that at last, for the first time since the end of the Gulf war in 1991, he faces a credible threat of military attack, supported by the important members of the UN and even by his Arab neighbours. So what, for example, does the foreign minister of Russia say? In effect, that the pressure can now be relaxed, that no new Security Council resolutions are needed, and that all will now be well. The only charitable way to interpret such a position is that it could be a clever feint to tempt Mr Hussein to show his true nature by modifying his offer again in the belief that the world's great powers are disunited once more. More likely, however, Igor Ivanov and others who echo such views are simply being recklessly irresponsible.

Resolute about resolutions

Might Saddam Hussein's offer be sincere? Might he really be willing to readmit the weapons inspectors unconditionally, allow them unimpeded access throughout Iraq, and accept complete disarmament of his chemical, biological and nuclear weapons or facilities? The possibility can be dismissed immediately. For even Mr Hussein will not know whether he is being sincere, at this point. On every single occasion in the past he has not been, for he has always done as little to reveal and disarm as he could get away with. That is natural, for evasion is in his interest. The same will be true now: he will do as little as he can get away with. It is just that he does not yet know how little or how much that will be.

The task for the outside world is to make sure that he has to be sincere, in every single respect. And the only way to do that is to keep up the military and diplomatic pressure. Indeed now would be a fine time to intensify it, given that Mr Hussein has shown in the past few days that he will blink under such pressure. America's military build-up, through exercises and forward deployments of troops, ships and aircraft should continue, in a steady but remorseless fashion. Iraq's Arab neighbours, especially Saudi Arabia, should keep up their diplomatic arm-twisting, both privately and publicly, to try to persuade Mr Hussein to make further concessions (see article). Above all, the

The outside world must make sure that Mr Hussein is sincere, in every single respect. And the only way to do that is to

Security Council needs to draft and then pass new resolutions about Iraq as soon as possible, setting terms that are as tough as possible.

keep up the military and diplomatic pressure

Some will argue that such resolutions are unnecessary, for all that is needed is for Iraq to fulfil the terms of the previous 16 resolutions laid down for it during the past 11 years. If only they meant it, for most who take this view think that only resolutions about weapons inspectors and disarmament need to be enforced, and not ones about Kuwaiti prisoners-of-war, Kuwaiti property or respect for Iraqis' human rights, among others. Yet two points argue for new resolutions. One is that this was the path the Security Council was heading down after Mr Bush's speech, and so to abandon it now would be to hand an unnecessary victory to Mr Hussein. A display of unchanged determination would put him back on the defensive. The second is that Mr Hussein's successfully evasive record during the 1990s makes it vital to set tougher conditions, using tougher wording and tougher methods, if there is to be any chance of success. In particular, inspectors will need the help of UN troops if they are to be able to do a proper job. At the same time, the demands in a new resolution can and should be set as broadly as is necessary to encompass the subject-matter of all the 16 resolutions he has flouted.

Call his bluff

For the United States and Britain to press for such a new resolution, or if necessary two new resolutions, will be risky. There will be a chance that France, Russia and China will withdraw the support or (in China's case) acquiescence they were previously showing. But, having gone so far to rally the UN, that is a risk worth taking. If France and Russia pull back merely because of one offer from a serial liar and murderer, then their support can never have been genuine in the first place. It is more probable, though, that with careful diplomacy and bargaining, they will be persuaded to fall in line.

Their bluff, in other words, will have been called. But the most important bluff to call is that of Saddam Hussein himself. He has long ago forfeited any right to be trusted. He has also forfeited the normal rights of sovereignty by his slaughter of his own people and his violations of international treaties, giving the outside world every right to be thoroughly intrusive in his internal affairs. The hope has to be that the more intrusive outsiders become, the more Mr Hussein's power will be eroded. The dream must be that one day soon he will join Slobodan Milosevic, another brutal dictator, in the dock for crimes against humanity. The worst fear, though, should be that he would succeed again in emulating a much more humorous man with a moustache, Groucho Marx, who said that sincerity was the most important asset in life: if you can fake that, you've got it made. Don't let him.

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Japan and North Korea

The apologetic kidnapper

Sep 19th 2002
From The Economist print edition

Dealing with North Korea may be getting interesting, but no easier

Get article background

A HANDSHAKE and a pair of apologies are a start. But will this week's controversial trip to Pyongyang by Japan's prime minister, Junichiro Koizumi, help reshape the history of confrontation between North Korea and the outside world, or merely offer another footnote to disappointment?

Much depends on what North Korea's leader, Kim Jong Il, is up to: is he genuinely searching for a way out of his bunker, or merely looking for a fresh pocket to tap for the funds he needs to survive? Quite possibly, both. But even assuming that he is ready to start settling at least some of his long-standing differences, not just with Japan, but also with South Korea and the United States, peace on the Korean peninsula can best be won if these three countries stick together as closely in their dealings with the unpredictable Mr Kim in the future as they have in the recent and difficult past.

Mr Koizumi did not return empty-handed from this first ever Japan-North Korea summit. He brought back news of some Japanese citizens who had been kidnapped over the years by North Korean agents, and he won a pocketful of promises (see article). Mr Kim said he would resume stalled talks about normalising relations with Japan, drop demands for “reparations” for Japan's past colonial rule in favour of “economic aid”, extend his moratorium on missile testing beyond the turn of the year, and keep to his obligations under a 1994 nuclear deal brokered by America that traded a halt to North Korea's production of bomb-usable plutonium for two western-designed nuclear reactors now being built.

All that is probably as much as Mr Koizumi could have expected—perhaps more, since in return for Japan's (previously proffered) apology for its past colonial behaviour, Mr Kim not only said he was sorry for the kidnappings, but promised not to reoffend. After years of bare-faced denials, such bare-faced contrition seemed something of a breakthrough. Yet it is also a measure of how difficult it will still be for Japan, South Korea and the United States to reduce the threat to regional stability from a regime that has so far made a national virtue out of remaining the last, dangerous relic of the cold war in Asia.

Aside from his hopes of a lift in the opinion polls at home, Mr Koizumi's chief aim this week seemed to be to show that, for all its economic woes, Japan was still a player in resolving the region's security problems. His officials point to Mr Kim's promise to hold off from further missile tests, and his readiness to live up to North Korea's commitments under the 1994 nuclear deal, as evidence of success. But North Korea has promised all these things before. Is there reason to believe they may add up to something this time?

He may run North Korea with an iron rod, but Mr Kim is not entirely immune to domestic pressures. In recent years, famine has killed some 2m North Koreans (out of about 22m), and only foreign food aid has saved many of the rest. But floods and drought have merely compounded a man-made disaster brought on by decades of Stalinism. Alarmed by the increasing outflow across its border of desperate North Koreans, China has long been pressing Mr Kim to change his ways. A revamp of wages and prices two months ago appears to be his attempt to imitate China's Communists, by reviving the economy while keeping a firm grip on power. With Russia and South Korea, Mr Kim has dusted off plans for a rail link that could eventually carry freight all the way to Europe.

But, as China no doubt reminds him, Mr Kim cannot find the huge sums he needs to rebuild his country's broken infrastructure without help from South Korea, Japan and America. He has tried South Korea: two years ago a summit in Pyongyang with South Korea's president, Kim Dae-jung, ended with promises of large dollops of South Korean aid in return for greater contact across the inter-Korean divide. But the northern Mr Kim kept up the hostility, while pocketing what cash he could. He then tried auctioning off his missile programme to the Clinton administration, which was anxious to see an end to North Korea's proliferation activities in unstable parts of the world, such as South Asia and the Middle East. But the deal was unfinished when George Bush decided to put an end to the practice of buying off North Korea's bad behaviour, since this seemed only to encourage more of it.

Keeping his attention

For more than a year now, Mr Bush has been offering North Korea an across-the-board improvement in relations, but only if North Korea starts attending just as comprehensively to the security threat it poses. This would mean not just ending its missile programme, but also admitting international inspectors to check on its past plutonium dabbling, as North Korea is obliged to do before the nuclear components for its new reactors are delivered. It would also mean discussing confidence-building measures to reduce the threat to South Korea from North Korean troops and artillery massed across the border.

Mr Kim, miffed at being included in George Bush's “axis of evil”, had seemed to turn that offer down flat. But it's a funny thing. Ever since Mr Bush declared his war on terrorism and weapons of mass destruction, Mr Kim has moved, despite the occasional zig-zag, in roughly the right direction: he has signed a series of UN conventions outlawing terrorism; he has moved to start expelling some ageing Japanese terrorists he had been harbouring; and now he has owned up to snatching those Japanese citizens, and sent Mr Koizumi home with a message that he is ready for talks with others, America included.

And not before time. Unless the inspection issue can be resolved soon, the reactor project could start to unravel, pitching the peninsula back towards confrontation and leaving North Korea with no check on its nefarious nuclear activities. Mr Kim had clearly been hoping that South Korea would provide an alternative source of the electricity the reactors are meant to provide, but it has so far refused. If Japan's promised aid flows too quickly, that might be another way he tries to wriggle off the inspections hook. Letting him do that would be sheer folly. Only by standing together and standing firm have America, South Korea and Japan coaxed Mr Kim this far out of his bunker. There is still a lot of careful coaxing to do.

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The German election

Time for a change

Sep 19th 2002
From The Economist print edition

Gerhard Schröder and his Green allies have disappointed. Germans should risk an alternative

Get article background

Reuters

EUROPE'S most powerful country holds an election this weekend whose outcome will be crucial for its ailing economy and for its standing in the world. But even inside Germany you would hardly know it. The economy is seriously, not just passingly, sick. It has grown more slowly, in the past eight years, than that of any other of the world's rich countries, bar Japan. How odd, then, that this blunt but undeniable diagnosis is not fully accepted by either of the main contenders in the election, Gerhard Schröder, the Social Democratic chancellor, and Edmund Stoiber, his conservative challenger. Both say that Germany needs reform. Who doesn't? But neither has the grit to risk even short-term unpopularity by proposing the necessarily painful treatment to ensure economic revival.

Mr Schröder, moreover, is beset by that enduring weakness of the able tactician, who never quite makes the grade as a statesman: he cannot resist promoting bad policies to earn cheap popularity, especially before elections. Witness, this week, his hectic rush to rescue MobilCom, a failed German telecoms company; and witness, even more plainly, his enthusiasm for rubbishing a possible American-led attack against Iraq, even if it were sanctioned by the United Nations.

What a pity. For if he were judged by his first two-and-half years in office, Mr Schröder would have merited another term (see article). For sure, his first year was a muddle. He lost valuable time, and the chance to grab the post-election initiative, as his disruptively ambitious finance minister destroyed himself. But with the opposition pole-axed by a party-finance scandal, Mr Schröder had a fair wind behind him—and began to take advantage of it. He embarked on an impressive series of tax-cutting reforms, made a tentative but worthy effort to persuade people to start buying private pensions, and seemed bent on the sort of liberalisation laid out in a go-ahead document issued jointly with Britain's Tony Blair.

He did the right things in foreign policy too. He broke a post-war taboo by proving ready, without alarming the neighbours, to assert Germany's own interests. He had the laudable nerve to send German troops alongside their allies into war-zones, in the Balkans (and more recently in Afghanistan). He also loosened Germany's old nationality laws, based on blood, and began sensibly liberalising immigration.

He blew it

But then, with the economy growing more perkily again in 2000, the old opportunism seemed to return. With the opposition still adrift, re-election seemed assured. Mr Schröder backed away from tackling the biggest causes of Germany's sluggishness: its over-protected workforce, reluctant to change and expensive to employ, and its strangulating red tape. He recently and belatedly endorsed a clutch of useful proposals by a Volkswagen man, Peter Hartz, to improve job-seeking and job-creating procedures, but the plans still failed to tackle the deeper causes of Germany's labour-market sclerosis. The global downturn and the burden of Germany's former communist east have made his task no easier. But they are not the main reasons for Mr Schröder's broken promise to bring unemployment to below 3.5m. Over 4m now lack jobs.

As an alternative, Mr Stoiber scarcely sparkles. He looks competent and businesslike. He impresses Germany's small and middling businessmen, whom he rightly sees as the touchstone of Germany's prosperity. He rather airily promises to cut taxes, squeeze debt and the deficit, and bring spending down—all a bit more eagerly than Mr Schröder does, though with no more precision. But Mr Stoiber, too, has meddling instincts, and is unduly wedded to the corporatism and consensus that, though they served Germany well after the war, now seem unable to provide it with pep.

On the social side, he has been at pains to distance himself from the bluff, beer-swilling Bavarian bigotry lampooned by northern cartoonists. But, in contrast to the charming, laddish Mr Schröder, he comes over as narrow, schoolmasterish, a shade intolerant, and lacking in warmth. Mr Stoiber's recent crude banging of the anti-immigration drum has smacked of Mr Schröder's own electoral opportunism.

Schroiber versus Schroiber

Above all, neither man gives the impression that he believes Germany's economy to be truly sick—and therefore in need of the kind of attention that might risk social strife. Perhaps, like the Japanese, many Germans look to their excellent infrastructure, generous welfare and cosy way of life, compare them with the rough-and-tumble of labour law and the frayed public services of, say, Britain and the United States, and think, well, why worry? Perhaps slipping down a rung or two in international league tables of wealth and growth is a price worth paying for serenity and social cohesion. The trouble, of course, is that the slippage can accelerate—and all those comforts may, sooner rather than later, be menaced too.

Despite his cautious conservatism, Mr Stoiber is more likely to listen to those who preach the need for the sort of economic medicine that might court some unpopularity. And in foreign policy, he has some shrewd advisers. They would surely have prevented a German chancellor from endangering relations with the United States even if he had wanted to counsel against an attack on Iraq.

Much will depend, if the election is as close as predicted, on the small parties—the Free Democrats (or liberals), the Greens and the ex-communists. A grand coalition of the two big parties is sometimes mooted. But that could well be a recipe for consensus-bound fudge. The only party in Germany that has consistently proposed ways to tackle the roots of the malaise is the liberal FDP. It alone argues for a wholesale unshackling of Germany's hidebound, suffocating economy.

The most hopeful outcome would be a coalition of Mr Stoiber's lot with a robust contingent of liberals yapping at his side. The deeper problem, however, is that too few Germans seem ready for a wrenching change. It may take another four years of steady decline before they realise just how badly they are going to need it.

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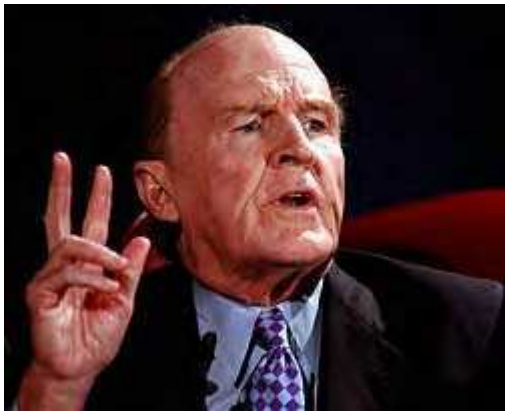
Chief executives

Easing the pain of parting

Sep 19th 2002
From The Economist print edition

How to say goodbye to the boss

AP



JANE WELCH has done General Electric's shareholders a favour. By listing in an affidavit as part of her divorce proceedings the cornucopia of benefits that her husband was offered by his generous colleagues on his retirement, she revealed what had not been fully disclosed to shareholders or the Securities and Exchange Commission (SEC): the country-club fees and corporate jets, flowers and groceries, help with the $80,000 a month Manhattan apartment and financial-planning services (although, with a deal like that, who needs them?).

It is amazing what a little transparency can do. Faced with what he described as “a helluva problem”—of deciding whether to alter the contractual agreement to shower him with such bounty—Mrs Welch's husband Jack has done the decent thing. He has decided to turn at least some of it away (see article) and restore the reputation he gained in the 1990s as an executive hero when he headed GE.

At least Mr Welch appears to have left GE in good shape, and built value for its shareholders. Many other bosses do far worse—and still expect a reward. Take that egregious example, Linda Wachner of Warnaco, claiming a vast pay-off from her bust business. Bosses from Jean-Marie Messier at Vivendi to Percy Barnevik at ABB, a Swiss engineering giant, seem to find greed hard to resist even when they are leaving a fallen star. How should responsible companies say goodbye?

For a start, they should think about that question first when they hire a new boss. In the flush of early excitement, it is all too easy to forget that a relationship may turn sour—and the figures for turnover at the top suggest a steeply rising corporate divorce rate. In Britain, most chief executives in big firms now have a one-year contract only; in America, the average is three. That swells the payment to a boss forced to leave early.

Then, when the boss eventually goes, the board's compensation committee should grit its teeth and stand firm. A chief executive's departing pay-off should reflect returns that shareholders have enjoyed under his reign. If the company has floundered, then bonus payments should certainly not be part of that pay-off. But, as Jeffrey Sonnenfeld, author of an extensive study of the subject, points out, even successful departing bosses often try to ease the pain of re-entry into normal life by demanding to keep the trappings of their heroic stature: limousines, offices, private jets. Such perks are hard to evaluate and an unreasonable addition to a generous pension.

Next, go for transparency. SEC rules oblige companies to disclose details of the departing boss's contract. But awkward information is squirreled into footnotes, or hidden behind such inscrutable phrases as “in a manner similar to” what the boss enjoyed when he was an employee. Hiding perks in such ways suggests that—well, there is indeed something to hide.

Guard against buried bombs

Finally, companies ought to ensure that a departing chief executive's rewards reflect the continuing success of the company. All too often, an incoming boss finds the place littered with unexploded bombs, planted by his predecessor. In order to discourage such behaviour, some of a departing boss's pay-off

could sensibly be tied to future, not past or current, corporate performance. One way is to use restricted stock that cannot be sold for, say, three years. A big award is justified only if it serves a useful purpose—such as persuading bosses to worry about what happens after they leave.

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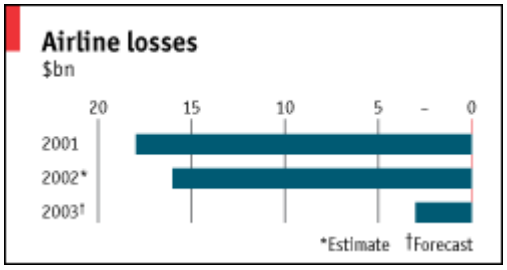
Airlines

Grow up

Sep 19th 2002
From The Economist print edition

Time for airlines to stand on their own undercarriage

Get article background



THE $5 billion compensation that the American government shelled out to airlines immediately after the terrorist attacks in September last year was generous, but understandably so. After all, the government had shut down American airspace for four days at enormous cost to the carriers, which were left with aircraft and crews all over the place. A shorter shut-down might have sufficed; certainly the closure of Washington, DC's local airport for weeks did untold damage to US Airways, so ensuring that it was the first of the big network carriers to go into Chapter 11 bankruptcy.

The greatest virtue of the rescue package was that it was done quickly. America, more than any other country, needs a properly functioning airline system. So there is an argument that it is in the public interest to use taxpayers' money in order to put the system back on its feet. But not without limit. The real question is whether the government was wise also to line up another $10 billion in guaranteed loans through the Air Transportation Stabilisation Board, a body created specially for the purpose. It might have been better, after the initial hand-outs, to have let the airlines sink or swim.

The case for leaving the airlines' fate in the hands of the market becomes stronger as it becomes clearer that the industry's troubles really pre-dated September 11th. In the late 1990s, in both America and Europe, airlines went on blithely increasing capacity and allowing labour costs to balloon even as their core market matured. The result can be seen in the continuing huge losses forecast for this year and next. The only growth is among no-frills carriers, which offer cheap fares for cost-conscious travellers, and threaten the business model of the mainstream airlines (see article).

Wider repercussions

One of the unfortunate side-effects of the Americans resorting to subsidies is that it has set a bad example just as the Europeans are trying to kick the habit. This summer Alitalia managed to persuade the European Union to approve yet another national rescue package disguised as a capital increase. Next in line is Olympic Airways, Europe's perpetual flying basket-case, which the Greek government has been talking about privatising for over a decade.

Such bail-outs would not be necessary were airlines not a protected species, with international trade governed by inter-governmental deals and with bans on foreigners taking control. In recent years deals between America and some European countries, such as France and Germany, have become more liberal. But the British-American deal, on the busiest of transatlantic routes between two normally free-trading nations, restricts competition to a cosy club of two British and two American carriers at crowded Heathrow, the London destination all carriers prefer. Given the impracticality of getting the world's 200-odd international airlines (and the governments that own many of them) to opt for free trade, the best way to liberalise aviation is through regional blocks.

The European Commission, which has successfully followed America in liberalising its internal market, needs to sit down with the Americans to work out an overall “open skies” package that would go much further than existing bilateral deals between individual European countries and the United States. If the two biggest aviation markets in the world could thus link their two liberalised regions in a transatlantic

common aviation market, the rest of the world would be under strong pressure to follow their example.

The industry that has done so much to facilitate globalisation would then itself join the process, to the greater good of both shareholders and travellers. Sorting out the problems of over-capacity would become easier as consolidation took place across national borders. Moreover, the sort of benefits that no-frills carriers are bringing to the liberalised American and European markets would become available in some form for long-haul travel too.

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Russia and Georgia

Putin's folly

Sep 19th 2002
From The Economist print edition

Russia would do better to bolster Georgia's stability, not undermine it

Get article background

Getty

THOSE who write speeches for Russia's president, Vladimir Putin, no doubt imagine they are good students of American foreign policy. They seem determined to copy, or rather caricature, every new American idea. They no doubt had a hand, too, in drafting the stern letter that Mr Putin sent to the United Nations, laying out his case for intervention in neighbouring Georgia unless its government clears its territory of a group of Chechen terrorists who have holed up there.

Like America in Iraq, his officials claim, Russia is insisting on its right to take military action, alone if necessary, against a nation which it deems to be in breach of international law; like America in Afghanistan, Russia justifies itself by recalling that failed states can be a source of festering security threats. Like George Bush, Mr Putin is merely proposing to act pre-emptively, *in extremis*, against a state that poses a deadly and increasing danger. Indeed, regime change cannot be ruled out.

A mixture of all these arguments has been used by Mr Putin and his lieutenants to justify their recent and repeated threats of military action against Georgia—some air raids have already taken place, say the Georgians, and Russians have been hinting darkly that a land attack may follow. The Georgians stand accused of posing a threat to Russian security because they cannot or will not take effective action against the Chechen fighters, possibly allied with Islamist extremists from elsewhere, who have set up camp in the remote Pankisi gorge. If you cannot solve the problem—and guarantee that no attacks on Russian territory will be launched from Georgian territory—then we will, is the Kremlin's message. The Russian media, meanwhile, have mounted an escalating series of personal attacks on Georgia's president, Edward Shevardnadze. The clear implication is that nobody in Moscow would shed a tear if, in the turmoil caused by a Russian attack, the leadership of Georgia were to change hands.

If there is one grain of truth in Russia's arguments, it lies in the fact that Georgia, while not a failed state, is one that has had difficulty asserting its authority in its border areas. Indeed in two of its regions—Abkhazia and South Ossetia—the writ of the Tbilisi government does not run at all. Even in other places, it struggles to collect taxes and enforce the law. This is a dangerous state of affairs; where the rule of law is absent, smugglers in drugs, guns and even deadlier things fill the void.

The mote in Russia's eye

But there is also a huge flaw in Russia's argument. If the Georgian state functions less than perfectly—in Pankisi and elsewhere—that is in large part because Russia itself has consistently undermined it. The restive mini-states within Georgia's legal boundaries (Abkhazia, South Ossetia and, to some extent, Ajaria in the south-west) defy the government with the help of powerful friends in Moscow.

By sending 150 or so military advisers to Georgia, America is attempting to bolster the country's security forces. But even that programme has been undermined by Georgian officers with connections in Russia. If Russians are concerned about the security of their southern frontier, they would do better to reinforce Georgia's statehood rather than chip away at it. Georgia is neither a rogue state, nor (as yet) a failed

one. Nor do Georgians need outsiders to orchestrate regime change for them. Imitation is a form of flattery, but others should not be duped into seeing parallels where none exist.

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The British countryside

Why the countryside is angry

Sep 19th 2002
From The Economist print edition

Rural people say they want “liberty and livelihood” from the government. They can't have both

BRITAIN has always had a thing about the countryside. Think of the Old Masters: the Dutch ones are of burghers, the French ones of naked women and the English ones of gentlemen surveying their rolling acres with an expression mixing complacency and contempt. The English country gentleman had good reason to feel rather pleased with himself: he was master of all he surveyed, and he could be sure that his land would provide him and his children with a comfortable livelihood for many generations to come.

Until now, that is. Farm incomes have plummeted since the mid-1990s, adding to a clutch of rural grievances, including the mishandling of foot-and-mouth disease, excessive regulation, declining rural services and a shortage of affordable housing. That is why, on September 22nd, around a quarter of a million country-lovers are expected to march in London.

Hunting is the rallying-cry bringing together these different interests. Almost immediately after it came to power in 1997, the Labour government announced that it proposed to ban hunting. This may have been a classic political mistake. While a majority of Britons favour banning hunting, they do not, by and large, mind very much about it. The minority who oppose a ban, by contrast, mind a lot. Then again, the plan to ban hunting may have been something altogether more cynical. The government may see it as a concession to its left wing that will cause a great deal of sound and fury but, in the government's view, no substantial harm.

Either way, it was a rotten idea. Hunting is not a particularly attractive sport, especially from the fox's point of view. But the human race has plenty of unattractive habits—adultery and lying, for starters—where criminalisation would constitute an excessive intrusion on individual liberty. If the primary concern of those who want to ban hunting is animal welfare, there are many prior targets at which they should direct their ire. Fox-hunting, which kills around 43,000 foxes a year (compared with 100,000 killed on the roads and 100,000 shot by farmers) causes far less suffering to animals than factory farming. Ban chicken nuggets before hunting.

Sodom, Gomorrah and Islington

The Countryside Alliance, the march's organisers, have managed to persuade people that the countryside is united against the town in its desire to hunt, but it's not true. Half of country-dwellers want it to continue, while the other half wants it banned or doesn't care. Over most issues, the countryside is no more united than it is uniform. From the wildernesses of Scotland to the near-suburbia of much of Hampshire, opinions over the countryside's future range from those who would ban all development in the interests of the environment to those who would let development rip in the interests of the poor. Country-dwellers are united more by antipathy towards what London has come to represent (Labour, asylum-seekers, teenage pregnancy, over-paid cocaine-sniffing bankers) than by any coherent set of complaints or demands.

No doubt the march's organisers thought “Liberty and Livelihood”, the slogan that the protestors will be marching under, vague enough to plaster over the divides within the countryside. Hard to be against either of those, after all. But the slogan itself shows up a contradiction in the countryside's demands.

The countryside is quite right to protest that it is losing its liberties. It isn't just that the metropolitan elite, *bête noire* of both the countryside and Labour's left (the two have more in common than they would like to think), plans to ban an ancient rural pastime. There are more serious grounds for

complaint, too. The growth of regulation, for instance, is a real burden. It is not, by any means, specific to the countryside, but it falls especially heavily on small businesses; and, while towns are dominated by large companies, small businesses and the self-employed predominate in the countryside.

The European Union is partly to blame. A recent set of regulations—which would have done nothing to prevent the spread of mad-cow disease—put many small rural abattoirs out of business, making life difficult and expensive for farmers with only a few animals to slaughter. Britain's government is guilty, too. Farmers trying to convert old barns to offices, for example, may find themselves squeezed between English Heritage (which wants historic buildings to stay historic) and health and safety bureaucrats, who want modern fire doors, ventilation and so on. The government's main response to this, characteristically, is to offer farmers consultants to teach them to fill in forms properly.

If the government is guilty of depriving the countryside of its liberties, is it equally guilty of taking away its livelihood? Well, in a way, but it isn't quite as simple as that. First, things are not as bad in the countryside as the protestors would have the townies believe (see article). Second, that interfering government is also the source of the livelihood of the most vocal bunch of protestors. The farmers get around £3 billion a year from the EU's Common Agricultural Policy, which comes, indirectly, from the British exchequer. “Liberty and subsidy” doesn't sound quite as catchy, does it?

Which is not to say that the farmers' economic pain is not real. They are going through the same difficult process of adjustment as heavy industry went through in the 1980s, when the government decided that enough taxpayers' money had gone down that particular drain. But the process has been made more, not less, painful by subsidy. Subsidy has allowed farmers to avoid thinking about how they might make a real living, and persuaded them to invest in land at inflated prices, thus burdening them with debts that they struggle to service.

The countryside is angry with the government for arguing that the Common Agricultural Policy should shrink, and for refusing to fatten subsidies further at national level. But the government is right, and not just because the CAP keeps foreign produce out and prices up. Subsidies have done farmers no good in the long run, and perpetuating them is not in their interests. Most of the countryside already looks elsewhere for its living, and farmers should do the same. Liberty from government, yes; livelihood from government, no.

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Letters

Sep 19th 2002
From The Economist print edition

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Who blew the bubble?

SIR – It is hard to agree with your attack on Alan Greenspan and the Federal Reserve ("Greenspan's bubble bath", September 7th). If, as you say, America's liquidity was as generous and unrestrained in the late 1990s, why did the dollar rise? The reasons for the bubble lie elsewhere. Europe is the real culprit. Euro-area central-bank liquidity shot ahead in 1998 and 1999. The new single currency proved a more efficient means of transaction than a dozen national units; consequently, demand fell leading to an excess supply of liquidity in European banks. This launched a tidal wave of European money at popular investments, such as American private equity and tech shares, and significantly weakened the euro.

Big errors in monetary policy come in pairs: for example, in America in 1926-29 (expansion) and 1931-33 (contraction), and Japan 1986-89 (expansion) and 1990-99 (contraction). Worryingly, the European Central Bank has been draining cash from euro-area markets. As expected, domestic economies are slowing and the euro is firming. Yet the ECB, and many pundits, believe that monetary policy is still too loose as nominal interest rates are low and broad-money growth remains high.

Has nothing been learned from Japan in the 1990s? Interest rates measure the cost of credit not the price of money. Sensible people do not want to borrow in a deflation so credit demand and, hence, interest rates are low. Moreover, fast broad-money growth may only tell us that precautionary savings are rising, as shares collapse and economies weaken. In short, the ECB is watching the wrong gauges. It risks steering the economy on to the rocks.

Michael Howell
London

SIR – Mr Greenspan's neglect of duty during the recent stockmarket bubble included ignoring a perfectly effective tool. The Fed has a legal right to raise and lower margin-account requirements. Margin borrowing is not that substantial but a rise in margin requirements during the day-trading frenzy would have had the same effect as a report of bad earnings or adverse economic data, with the added benefit of issuing a warning signal without restricting credit for legitimate business needs.

L. Paul Newburgh
Los Angeles

Fat of the land

SIR – Americans have a bad diet not because they eat too much fast food, or too much fat and sugar, but because they eat all the time and they eat too much ("Come on in", August 31st). Calorie intake controls body weight far more than nutrient balance. There is no magic proportion of fat, vitamins, minerals, fibres and sugar in the diet. If you eat too much, do not complain about your waistline.

Piero Dolara
Florence

Scotch mist

SIR – Scotland's "victimhood...an invention" ("Chips with everything", September 7th)? Do you suppose

that Edward Plantagenet took the title “Hammer of the Scots” because he was a handy carpenter? More recent were the highland clearances, but were they not a case of Scottish clan chiefs selling out their own people? No doubt poor journalism has convinced my ruder compatriots that the English were behind this. The third verse of “Flower o' Scotland”, the country's unofficial anthem, behoves us to leave history in the past, and to stand up and face the future. Nationalists should remember that.

John Shaw
Paris

SIR – Any belated realisation of inequitable treatment of Scots may be the unmasking of disinformation masquerading as history. Romanticism, tartans and kilts were not an invention of the Scots who fought for Scotland but largely the result of a 100-year campaign by the establishment, though it failed to hide its direct encouragement of and connection with past horrors and socially destructive commercial investments. The associated campaigns of genocide, levelled largely against the Highlanders and Islanders, caused many to leave Scotland. There is no reason why spelling out the historic facts should create any anti-English sentiment but, rather, will simply set the record straight.

Hector McNeill
Portsmouth

Kicking Italian football

SIR – Italian football is plagued by long-term problems that you do not mention (“A long dry season”, September 7th). These have been evident for almost a decade but were glossed over by large inflows of television money. The game in Italy is over-dependent on TV revenues. Italian clubs lag far behind those in England and Spain in expanding alternative sources of income, most notably merchandising. While we non-fans decry their number, Manchester United has superstores the world over. English clubs have made massive inroads into Asia in terms of both TV audience and merchandising. Similarly, Spanish clubs have begun to tap vast markets in Latin America, and lately North Africa. Bigger Italian clubs like Milan, Inter and Juventus are trying to redress the balance though, without European success, it may prove difficult.

Italy's problem in Europe is one of tactical inflexibility. This is a harder nut to crack. In the past two years, no Italian club made the quarter-finals of Europe's leading competition, the Champions League, simply because they lack the tactical nous to deal with the faster tempo of the Spanish or English game. The excuse? Dark mutterings of conspiracy, something shamefully brought to a fever pitch at this summer's World Cup. I, like most other discerning fans, shall continue to enjoy Spanish and English football.

Narayanan Raman
Kuala Lumpur

Taxing problem

SIR – Your story on who pays and profits from transportation offers tax-increment financing (TIF) as a glimmer of hope from America (“Getting there faster”, August 31st). In fact, TIF is just another way to privatise profits and socialise losses. In America it is used for such things as building hotel garages that hotels are apparently unwilling to build themselves. Instead, they are allowed to capture the increased property taxes their own property development generates and privatise it at the public's expense.

Even better, cities with multiple-taxing entities allow some to beggar others. City governments grant TIFs allowing their friends to benefit while school districts, mosquito-abatement districts and other government entities are starved of naturally occurring revenue growth.

Tom Young
Washington, DC

SIR – If governments are to claim tax on increased land values from public investment in transport infrastructure, surely they should also compensate those whose property values fall as a result of pollution caused by increased congestion and emissions, or make up for relative declines in value because of investment elsewhere. Perhaps inhabitants of the north of England should be compensated for policies favouring London and the south-east?

Matthew Rhodes
Leamington Spa, Warwickshire

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Germany's election

Giant steps

Sep 19th 2002 | BERLIN
From The Economist print edition

The parties are neck-and-neck, but neither leader looks up to the challenge of putting Germany right

Get article background

IT WAS Friday September 13th, the day of the budget debate in the Bundestag, the German parliament. Edmund Stoiber, the conservative candidate for the chancellorship, confidently grasped the lectern. This was his big chance before the election, on September 22nd, to bring the campaign back to the central issue: the dire state of Germany's economy. For nigh on 40 minutes, he harangued the government in an excellent speech full of the most damning facts and figures. Was the country now to go “upwards with the conservatives, or downwards with the Social Democrats?”, he thundered in conclusion. Chancellor Gerhard Schröder, his Social Democratic rival, merely laughed. “Mr Stoiber,” he sneered, “you may want to become chancellor, but you simply don't have what it takes.” The Bavarian prime minister seemed visibly to deflate.

A few hours later it was reported that, for the first time since the beginning of the year, the Social Democrats and their Green coalition partners had overtaken the Christian Democrats and their likely liberal allies in the polls. Only a few weeks ago, most thought they were heading for defeat. Now Mr Schröder's competent handling of last month's floods in the east, and his intransigence over attacking Iraq, appear to have made the difference. The state of the economy, it seems, has been pushed from voters' minds.

Yet not for long. At stake in this election, in Mr Schröder's words, is the fate of “the biggest, most important and economically most powerful country in Europe.” Biggest? Yes, in terms of population, which, at 82m, is a third bigger than that of any other EU member. Most important? Possibly, for its geographical position and the size of its GDP, which accounts for a third of the economy of the 12-member euro-zone. Economically most powerful? Hardly.

In fact, Germany has become Europe's sick man. Last year, it managed no more than 0.6% growth, the worst in the EU, after its economy moved into recession (by the standard measure) in the final two quarters. It will probably do no better this year; some growth forecasts are as low as 0.25%. Unemployment has topped 4m and is still rising. Business investment has been falling for seven quarters. Consumer spending remains depressingly flat. The retail trade is in crisis, as is the construction industry. Bankruptcies, 25% higher than last year, are heading for a record 40,000 with the loss of 600,000 jobs.

In the 2002 world competitiveness ratings, compiled by the International Institute for Management Development, Germany slipped to 15th out of 49 countries. For its notoriously inflexible labour-market

policies, it ranked among the lowest. Industrial labour costs in western Germany are higher than in any other country. Germany's tax and social-welfare burden is one of the heaviest in the world. Its share of world trade is falling. Demographic decline is threatening to explode its social-welfare structure. Its health system, the second-most-costly in the world, is under stress. Its schools, once its pride, are failing: Germany came a humiliating 21st in last year's OECD study of the educational performance of 15-year-olds. The country is staggering under a massive public debt. And, despite government denials, it may well breach the EU's 3% budget-deficit limit for euro-zone members this year.

The Schröder score-sheet

Some of Germany's recent economic weakness can be blamed on factors outside the government's control. Not only did Germany lock its economy into the European Monetary Union at what now looks like an overvalued exchange rate, but the European Central Bank's monetary policy is too tight for Germany. Nevertheless, politicians from both parties have done their share of damage.

Mr Stoiber naturally blames his rival for turning Germany into a “basket case”. But when Mr Schröder took over from Chancellor Helmut Kohl in October 1998, after 16 years of conservative rule, the country was in some ways in an even worse state. Unemployment was a shade higher than it is now. Germany's debt, taxes and welfare contributions were all at record levels. The labour market, health, pensions and school systems, left virtually untouched throughout Mr Kohl's long reign, were crying out for reform. And the economy, which had been tottering along with average GDP growth of 1.3% a year since unification in 1990, was being slowly suffocated under the same red tape about which Mr Stoiber so loudly complains.

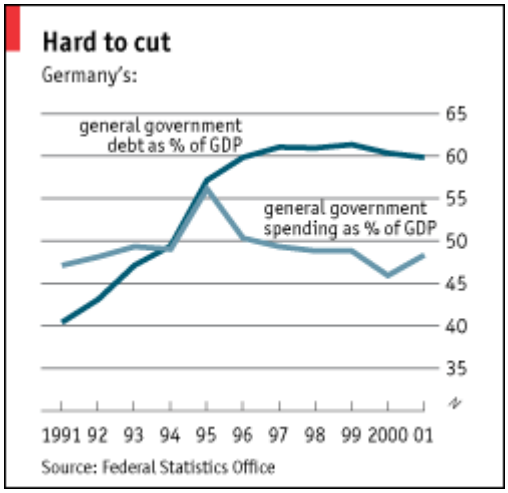
Mr Schröder can be, and has been, sharply criticised for failing to do more. During his term, average GDP growth, at 1.8% a year, has been little better than under Mr Kohl. But he has at least made a start on reform, and it is not inconsiderable. Under his tax reforms, the boldest since the 1950s, corporate taxes have been chopped from 52% to 39%, and the top income-tax rate is being progressively brought down, from a peak under Mr Kohl of 53%, to 42% by 2005. Under the government's less spectacular pension reform, state-subsidised privately-funded pensions have been set up, for the first time, to supplement dwindling state pensions. This new scheme, though inadequate, is at least a basis to build on.

With his five-year *Sparpaket*, or austerity programme, launched in 1999, Mr Schröder has tried to consolidate the country's runaway finances. Under Mr Kohl, public spending had soared to over 50% of GDP. Mr Schröder wants to cut that figure to 42%; so far, he has managed only to lop off a couple of percentage points. But this, too, is a start. He has also halted the steep rise in the public debt, trimming it from a record 61% of GDP, where Mr Kohl left it, to just under 60%. Social-welfare contributions, though still far too high, have likewise been pruned, falling from a peak of 42.3% in 1998 to 40.8% last year—though, squeezed by the economic downturn, they have edged back up since. And although the government appears to have failed to bring the public deficit under control, its long-term aim is still to balance the books, for the first time in 30 years, by 2006.

In other areas, his record is more impressive. Defying strong conservative opposition, Mr Schröder has dared to touch immigration—the first chancellor to do so since the Third Reich. His new law allows urgently-needed foreign specialist workers into the country, while tightening restrictions on others. To help integrate the 7.3m foreigners (including many of the second generation) already living in Germany, the chancellor has also changed Germany's age-old blood-based nationality laws, giving an automatic right to citizenship to anyone born on German soil.

Some lesser reforms are also noteworthy. Mr Schröder has browbeaten Germany's richer states, like Bavaria, into accepting a new *euro*157 billion ($152 billion) “solidarity pact” to help rebuild the struggling former communist states in the east up to 2020. He has given gay couples the same pension, welfare and inheritance rights as married heterosexuals. He has made a first stab at agricultural reform, trying to wean Germany's 430,000 heavily subsidised farmers away from ever-greater production and into more environmentally-friendly farming practices. He has even taken tentative steps towards labour-market reform by endorsing the proposals of a commission under Peter Hartz, a Volkswagen man, to stimulate jobs and make labour exchanges more efficient.

In foreign affairs, he has presided over democratic Germany's coming of age, leading the country into its first foreign armed conflict since the last world war (in Kosovo) and its first foreign war outside Europe (against al-Qaeda in Afghanistan). On both occasions, he risked the collapse of his government. Germany now has 9,500 troops deployed in international peacekeeping missions, and its forces, though still woefully cumbersome, have begun to be modernised. Mr Schröder's present refusal to offer German support for an American-led attack on Iraq, even if mandated by the United Nations, is a further sign of his country's growing assertiveness and independence, though it also smacks of populist electioneering.



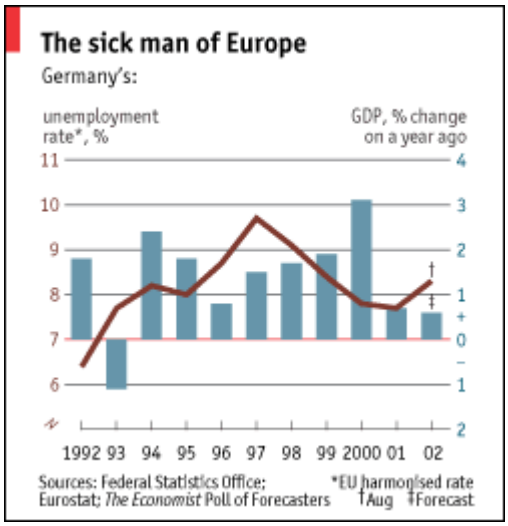
Conservative promises

Mr Stoiber says, of course, that he would do more and better. His key pledge, summed up in the slogan "3 x 40", is to cut public spending, the top income-tax rate, and social-welfare contributions all to under 40% , though he does not say by when. These are not so different from Mr Schröder's own goals (42%, 42% and 40%). At the same time, Mr Stoiber promises to quadruple child benefit to *euro*600 a month for every child under three; abolish social-welfare contributions on jobs earning less than *euro*400 a month; scrap the "green" tax on energy; pump even more cash into eastern Germany; provide more help for small businesses and increase spending on defence, hospitals and schools.

Most Germans doubt whether all this adds up. An economist at the Société Générale bank estimates that Mr Stoiber's programme would cost at least 5.5% of GDP, pushing the public deficit way over the 3% Maastricht limit. Yet Mr Stoiber insists that he would stay within it. "A higher growth rate," he says blithely, "is the solution for all problems."And cutting taxes and loosening the labour market is the way to achieve it, says Lothar Späth, the man designated by Mr Stoiber to head a new super-ministry for economics, employment and eastern reconstruction if the conservatives win on Sunday.

As prime minister of Bavaria, one of Germany's richest and most successful states, for the past nine years, Mr Stoiber has acquired something of a reputation as an economic miracle-maker. Bavaria, once a poor agricultural state, is now one of the most prosperous and advanced high-tech regions in the world, with the highest growth (over the past decade), smallest debt per head, and second-lowest unemployment in Germany. But the state was already flourishing when Mr Stoiber took over in 1993, and he has merely continued the policies of his powerful predecessor and mentor, Franz-Josef Strauss. Mr Stoiber has proved an energetic and efficient administrator, but no great innovator. Transferring his Bavarian policies to the national stage would be harder.

Mr Stoiber maintains that Germany's present economic woes are essentially *hausgemacht* (home-made), and not the results of the world economic downturn, as Mr Schröder claims. But Mr Stoiber may have to change his tune now that Bavaria, too, is beginning to feel the pinch of the slowdown. Last year, its economy grew by only 0.9%, making it fifth among Germany's 16 *Länder*, and company bankruptcies soared by 28%.



On paper, Mr Stoiber's proposals look more likely to boost the economy than Mr Schröder's. But he would still find it tough to push through long-term free-market reform, for he is no economic liberal. Like the chancellor (the son of a war-widowed charwoman), he has humble origins: his father started out as a clerk in a building firm, and he sets great store by the "social" element in the name of his party, the Christian Social Union. As the self-styled champion of the "little guy", he speaks up for the *Mittelstand*, Germany's small- and medium-sized businesses; he accuses Mr Schröder, by contrast, of pandering to big business. Mr Stoiber says he wants "productivity *and* solidarity, individual freedom *and* social security, self reliance *and* help for the needy."

A practising Catholic, who proudly proclaims that he has been married to the same wife for 34 years—

unlike the four-times-married Mr Schröder—Mr Stoiber promotes old-fashioned family values. He seems to prefer women to stay in the kitchen, despite two lawyer daughters, and opposed the new law on gay rights. He advocates “zero tolerance” on crime and would clamp down on immigration. In the foreign arena, Mr Stoiber is likely to be more pro-American than Mr Schröder. Unlike the chancellor, he has refused to rule out German help for a strike on Iraq.

Eastern drag

Not since 1945 has an election been so hard to predict. Most Germans may not think much of the present government, but nor are they convinced that a conservative one would do much better, especially on the economy. Voters, particularly women and easterners, tend to find the relaxed, punchy Mr Schröder more likeable than his earnest rival, but Mr Stoiber is considered more competent on jobs and the economy. Both get roughly equal scores for intelligence, trustworthiness and credibility. Neither is thought likely to push for radical reform. Mr Schröder is deemed too beholden to the unions, while Mr Stoiber is judged too hand-in-glove with churches, farmers and small shopkeepers. Both are staunch supporters of Germany's “social market economy”.

The only proposers of really radical reform are the liberal Free Democrats, who are currently expected to win around 8% of the vote. Some argue, therefore, that any party that is serious about reform would have to include them in a governing coalition. The liberals have not yet said which side they would live with after the election. But after 16 years in coalition with the Christian Democrats under Mr Kohl, they had little to show for their reforming zeal, and their policies would attract fierce resistance from the unions.

Something bold is needed, however, for Germany's problems go very deep. In a paper entitled “Germany over the next 30 years”, the Management Circle, a group of some 1,100 senior and middle-managers linked to the Friedrich-Ebert Foundation, a Social Democratic think-tank, examines where the country has gone astray and sets out the most urgent tasks for the future. After three decades of extraordinary economic success after the war, says Ulrich Pfeiffer, the group's spokesman, Germany began to lose its way in the 1980s. The danger signals were obvious: slowing birth rate, diminishing productivity, spiralling welfare costs, uncontrolled immigration. But Germany, well-off, contented and hard-working, did not think to do anything.

Then came German unification. A region of 16m people, with a clapped-out economy and no modern infrastructure, expected to be raised almost overnight to the level of one of the richest and most advanced nations in the world. The biggest economic mistake, though understandable in political terms, was the setting of an exchange rate of 1:1 for the east German currency against the mighty Deutschemark. Wages and prices soared, making east German products even less competitive and lengthening the dole queues.

Over the past decade, the region has made huge strides thanks to a massive net public transfer of around *euro*75 billion a year—equal to 4% of German GDP. But productivity and wages still lag some 30% below the west's. Unemployment, currently at 18%, remains more than twice as high. After a post-unification spurt, the region's economy has slowed over the past five years to an annual average of just 1.0%—half the western rate. Last year, it actually went into recession, shrinking by 0.1%, and is expected to register, at best, no growth this year. An exodus of many of the east's brightest has not helped. Nearly 2m have left for the west since the Berlin wall came down. All this is a burden for Germany which no other industrialised country has had to bear.

Germany as a whole has certainly not been doing well over the past decade. But if western Germany is taken on its own—and it is only this part, after all, that used to be known as Europe's power-house—the recent picture has looked a little less gloomy. In 2000, western German growth—having averaged only 1.2% a year over the past decade—was the same as the EU average of 3.4%. Last year, the world's second-biggest exporter was hit earlier and harder than most by the world economic slump, and western Germany's economy slowed to 0.7%, less than half the EU average. But the downturn is now affecting the rest of Europe. In the first two quarters of this year, western Germany's growth, though still sluggish, was again around the EU average. As for German unemployment, it stands exactly at the EU average of 8.3%, if the harmonised European figures are used and not the much higher German figures. In western Germany the rate is much better, only just above 6%.

Germany is still the world's third-biggest economy, with plenty of world-class companies, a huge trade surplus and a well-trained and determined labour force. But it is no longer fulfilling its potential. Over the

past three decades, the problems have been piling up. Germany has already begun to slip behind. What is now needed is a strong, courageous leader who is ready to push through bold, inevitably painful, structural reform. If neither Mr Schröder nor Mr Stoiber appears to fit the bill, this is not just Germany's loss.

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George Bush and Iraq

Your moves

Sep 19th 2002 | WASHINGTON, DC
From The Economist print edition

The president's speech to the United Nations about Iraq may transform domestic politics as well as international diplomacy

Get article background

GEORGE BUSH has pursued almost exactly the same gambit to persuade Congress and the Democrats to back his Iraq policy as he has used to twist the arms of European and Arab allies. The move seems to be working slightly better on the foreign board than the domestic one.

In both cases, the president began by staying silent while criticism of American unilateralism began to erupt around him—from “friends” abroad and members of his father's administration at home. This encouraged Democrats at home and sceptical allies abroad to demand a big debate about Iraq before committing themselves.

Next, someone conveniently leaked an opinion from White House lawyers that claimed the president did not need Congress's authorisation to go to war, even while the vice-president, Dick Cheney, was alarming the United Nations by publicly dismissing weapons inspectors as providers of “false comfort”. This naturally provoked Congress and the UN into demanding their say.

Then, with pressure building up on what were really procedural matters (do we consult the UN?) not substantial ones (should we attack Iraq?), Mr Bush calmly pulled the rug from under his critics' feet. By taking his case to the UN and Congress, he conceded the procedural points without giving an inch on the substance. This put the onus back on his opponents—demanding the UN put inspectors back in, demanding Congress pass a resolution, and forcing Democrats to respond on the merits of his case against Iraq.

That does not mean that Mr Bush has won the game—particularly on the foreign board. His speech to the UN was initially greeted with praise for the case he made and some relief that he had couched it in terms of international law and UN agreements. Saudi Arabia, for instance, offered the use of its Prince Sultan airbase for any UN-backed operations. But there was a catch: what operations?

By offering to accept the current inspections regime before a tougher one could be agreed upon, Saddam Hussein then managed to split the UN Security Council and plunge it into discussion about the devilish details of the inspectors' remit. Russia's foreign minister, Igor Ivanov, said: “We don't need any special

resolution for [inspections] to occur. All the necessary decisions about that are to hand." His French peer, Dominique de Villepin, initially took that view too, though he later backtracked a bit. America, by contrast, is adamant that the current inspections regime is too lax.

Under the latest UN resolution, number 1284, issued in December 1999, the inspectors would have 60 days to draw up a schedule of the steps towards disarmament that Iraq must take. Four months after fully satisfying the inspectors, and setting up a monitoring system, sanctions could be suspended.

The administration maintains that the inspectors can have no idea what weapons Iraq has, since they were booted out four years ago. It wants Iraq (not the inspectors) to draw up a list of what it has; then the inspectors will check it, with even the smallest unaccounted-for weapon being a breach. And it says that the current regime has too many loopholes—for instance, it puts conditions on the inspection of so-called "presidential" sites.

There is also a timing problem. Some of Mr Bush's people think that, because the inspectors have been out of Iraq so long, it could take a year or more to satisfy the current demands. Though America still needs time to assemble its forces in the Gulf, it does not want to wait a year. For all these reasons, the administration is now trying to get the Security Council to pass a new resolution with tougher conditions for Iraq in the teeth of Russian objections.

America's case may not be deadlocked at the UN. Forced to choose between Iraq and America, Vladimir Putin would surely not back a dictator who owes him billions or risk American condemnation over Chechnya. But for the moment, Mr Hussein's ploy has brought closer an unenviable choice for Mr Bush: if he cannot get the UN to agree to tougher inspections, he may have to disregard the UN after all.

At home, Mr Bush's speech has worked better. Its first effect was to unite his own party. Immediately after the speech, two leading senators, Trent Lott and John McCain (who rarely see eye to eye on much), issued a ringing endorsement of Mr Bush and called on the Senate to pass the required congressional resolution forthwith. Chuck Hagel, one of the leading Republican critics of unilateral action, backed them.

Less predictably, Mr Bush's speech forced Democratic leaders in Congress into line. After previously saying there was no hurry to get a resolution passed before Congress's session ends in October, Tom Daschle, the leader of the Senate, finally said yes, Democrats would vote for a resolution supporting possible use of force in Iraq. As *The Economist* went to press, the White House was due to send a draft resolution to Congress.

From an electoral viewpoint, this has forced the Democrats to adjust their position. Their basic Iraq strategy had been to change the subject. Almost no Democrat opposes regime change in Iraq, but few want to talk about it because they think it distracts from their favourite domestic issues—Social Security, prescription drugs and so on. Edward Kennedy was open about this: "We can't let it [Iraq] replace the domestic agenda."

When they haven't been able to change the subject, the Democrats have tried to obfuscate. Some have accused the White House of "wagging the dog": in the words of the director of the Senate campaign committee, "the administration has timed the Iraq public-relations campaign to influence the mid-term elections". (If polls are any guide, few Americans believe this.) Others, like Dick Gephardt, the party's leader in the House, have argued that Mr Bush must explain how attacking Iraq fits into the war against terrorism and give more details on Iraq's nuclear weapons. Still others say America should not go to war without a new UN resolution.

These are legitimate issues. But as a political strategy they have been destroyed by Mr Bush's dual approach to the UN and the Congress. The Democrats have been left nit-picking about procedures. This may be understandable: without the intelligence reports available to the president, few people are willing to contradict his claim that Mr Hussein is a danger to the world. In this form of asymmetric politics, the president has the advantage. But that does not lighten the Democrats' burden. The congressional resolution will pass, perhaps overwhelmingly.

That leaves the complicated question of the November mid-term elections. The Republicans are clearly seeking to use Mr Bush's popularity (which is now going up again) to turn the elections into a referendum on him, and on Iraq. He seems happy to lend his prestige to stump speeches for Republican candidates. Advertisements on Iraq have started to crop up in local races and Republicans are circulating Democratic votes in the resolution before the 1991 Gulf war (most voted against).

This is a risky ploy because domestic debates about war have not usually been partisan affairs: politics is supposed to stop at the water's edge. Mid-term elections have anyway tended to be referendums on domestic matters. Republicans can thus refer to the war—but not in such a way that it looks as if they are trying to score partisan points (even when they are).

For their part, Democrats, having lost the Iraq debate, must find a new way to emphasise the domestic agenda. The congressional resolution might come early enough for voters to have forgotten about it by November 5th. More likely, though, Democrats will have to hope the mid-terms are not a national election at all, just a series of local races.

It is unclear whether the races will be “nationalised”. But on current trends, Republicans do not look likely to lose more than a handful of seats at worst—defying the usual mid-term reaction against the party in power. For that, the Iraq debate must be partly responsible.

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Al-Qaeda

The fifth column

Sep 19th 2002 | LACKAWANNA, NEW YORK
From The Economist print edition

A sleeper cell is supposedly discovered in upstate New York

IN THEORY, it was a good week in America's war against al-Qaeda. In Pakistan, the authorities arrested Ramzi bin al-Shibh, the alleged mastermind of the September 11th attacks: he will probably go to join other terrorist suspects in Guantanamo Bay. The FBI also picked up six alleged members of an al-Qaeda cell based in Lackawanna, near Buffalo, on the New York-Canadian border.

Yet, for many Americans, the news from Lackawanna is a grim reminder of al-Qaeda's omnipresence. The steel town, though down on its luck, has an all-American feel, with well-kept clapboard bungalows and plenty of patriotic flags. The suspects—five of whom were picked up in the town, the other one in Bahrain—are of Yemeni descent; but they were all born in the United States and went to the local high school. One was voted the friendliest in his class; another worked as a security guard at a home for troubled children. All were registered to vote—as Democrats.

No weapons or explosives were found when their homes were searched. The main, circumstantial, evidence against them is that in 2001 they travelled to Pakistan for the same extreme form of religious training received by John Walker Lindh, the so-called American Taliban, and Richard Reid, the accused shoe-bomber. According to one suspect, four of them then went on to an al-Qaeda camp for weapons training and a pep talk by Osama bin Laden.

It is not clear why the authorities pounced this week. The FBI had been monitoring the young men even before last September's attacks, and had pulled in at least one of them several times for questioning. In July, the bureau intercepted an e-mail that mentioned possible terrorist activity.

The arrests came a few days after a code-orange warning, indicating a high chance of a terrorist attack. Increasingly, the authorities are under pressure to move pre-emptively. This week, Senate hearings revealed that the intelligence services were warned that al-Qaeda might use aircraft as weapons before last year's attack, but did little about it.

The arrests follow similar round-ups elsewhere. Last month, five men, including three Moroccans and an Algerian, were arrested in Detroit for conspiracy to provide material support to terrorists. Two Lebanese brothers in North Carolina were convicted in June of helping to run a support cell that funnelled cigarette-smuggling profits to Hizbullah.

But the arrests are still a shock for Lackawanna, which has long had a small community of Yemenis (originally, they came to work for Bethlehem Steel). The mayor says that his first reaction was: “Not in my backyard.” He may not be the last mayor to be surprised.

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Fiscal policy

Deficits, dividends and discretion

Sep 19th 2002 | WASHINGTON, DC
From The Economist print edition

The present is better than it looks; the future may be worse

HOW well off is the American government? The answer depends on the timeframe. From a long-term perspective, the government's finances have taken a hit. When George Bush entered the White House, the Congressional Budget Office (CBO) expected surpluses of $5.6 trillion over the next decade. Now the forecast is for a surplus of around $1 trillion by 2012—and that is only if you assume that Mr Bush's tax cuts will expire in 2010, something they are formally supposed to do, but few politicians believe will happen. In practice, those tax cuts, coupled with a falling stockmarket and Congress's appetite for spending, have eaten up the surplus.

On a short-term view, though, the picture is different. Fiscal loosening has helped prop up the faltering economy. Indeed, with state budgets tightening, interest rates at historic lows and the recovery still looking anaemic, some on Wall Street think that a greater fiscal stimulus may be necessary.

According to the Bush team, the right sort of fiscal policy is to control spending now and cut taxes in the future. Mr Bush has happily signed plenty of expensive laws, including $86 billion in new farm subsidies over the next ten years, and only this week the White House warned that a war with Iraq might cost $200 billion. But the president makes much of Congress's profligacy. In August, he pointedly refused to sign a bill that contained $5.1 billion in “emergency spending”, which he deemed unnecessary. Just this week, he berated Senate Democrats for their lack of budget discipline.

Mr Bush believes that the best boost for America's drooping economy is to make last year's tax cut permanent. Others want an immediate round of tax cuts too. Larry Lindsey, Mr Bush's closest economic adviser, is championing a package of measures designed to help beleaguered stockmarket investors. The economic merits of these ideas are mixed. One idea—reducing the double taxation of dividends—would improve the tax code. Another—allowing people to put more money into tax-preferred retirement accounts—might boost saving, but that would mean that consumers spent less in shops now.

The main point of talking about such tax cuts is political. Even Mr Bush's supporters agree that tax cuts for investors would have virtually no chance of congressional passage before November's elections. The idea is to give Republicans something to offer investors, though some congressional Republicans worry that they would be accused of pandering to the rich.

A sinking ship?

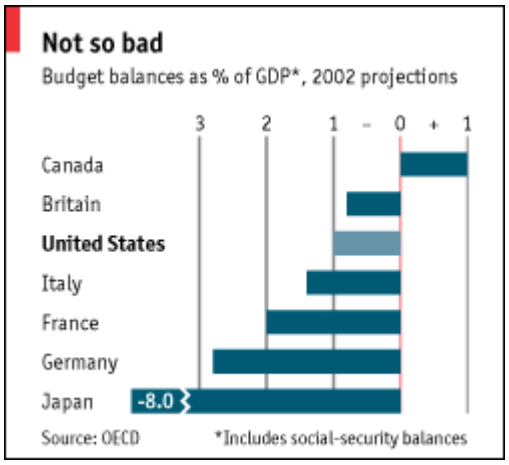
That would certainly be the Democrats' position. They have blamed the worsening deficits on Mr Bush's tax cuts, often in dramatic terms. Kent Conrad, the chairman of the Senate Budget Committee, says the president is “punching more holes in the hull as the ship goes down.”

Despite their claims to fiscal probity, only a minority of Democrats (including two presidential hopefuls, Joe Lieberman and John Edwards) have argued that the tax cut should be delayed or rolled back. And the Democrats have made no effort to scale back their spending plans, which include expensive prescription-drug benefits for older Americans.

Alan Greenspan has also weighed in. There is plenty of fiscal stimulus already in the pipeline, argues the chairman of the Federal Reserve: the real risk is that Congress may abandon fiscal discipline entirely. Avoiding this fate does not mean rolling back Mr Bush's tax cuts (which Mr Greenspan famously endorsed last year), but depends on controlling spending. Mr Greenspan wants a raft of budget rules that were introduced in 1990 and are due to expire on September 30th to be extended. These rules set explicit

caps on discretionary spending (the money that lawmakers appropriate every year) and demand that tax cuts or policy increases in mandatory spending, such as on Medicare, be paid for by cuts elsewhere. In Mr Greenspan's view, these rules helped push down discretionary spending from 10% of GDP in 1990 to 6.5% by 1998.

At least some of these budget rules may eventually be extended. But a return to the discipline of the 1990s looks unlikely. There is no strong consensus for deficit reduction now, as there was a decade ago. Despite some politicians' apocalyptic language, America's fiscal position for the next few years is relatively comfortable; indeed, it is still stronger than in many other industrial economies (see chart). With global growth weak and deflation a risk, an obsessive focus on deficit reduction in the short term would be misplaced.



The medium term is cloudier, but not disastrous. The official budget forecasts of a return to surpluses by 2006 look too rosy: they make unrealistic spending assumptions and ignore unavoidable tax changes, such as fixing the Alternative Minimum Tax, which will affect a third of all taxpayers by 2010. Yet even with more realistic assumptions about spending and tax policy, a return to the huge deficits of the early 1990s (which peaked at 4.7% of GDP in 1992) seems unlikely.

Yet this relative fiscal health masks a long-term problem that begins to bite at the end of this decade: the ageing of the baby boomers. According to a recent study by the CBO, spending on entitlements—pensions and, particularly, health care—will soar from 7.6% of GDP in 2000 to 11.3% by 2020—and that is without any new expensive prescription-drug benefits. By contrast, discretionary spending is only 7.1% of GDP and is supposed to fall (admittedly according to those optimistic figures) to 5.7% by 2012.

This underlines an important point. America's long-term fiscal health depends less on controlling discretionary spending (the current focus of Mr Bush) than on controlling entitlements. As Bob Reischauer of the Urban Institute puts it, even the strictest controls on discretionary spending will be a “rounding error” in the overall budget problem of the future.

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The Massachusetts primary

Waiting for Mitt

Sep 19th 2002 | BOSTON AND WASHINGTON, DC
From The Economist print edition

The year of the female governor? Or of the Olympic organiser?

AP

One half of the marathon completed

SHANNON O'BRIEN had reason to look drained on September 17th, after she finally won Massachusetts' Democratic primary for governor. Throughout most of the long campaign, the state treasurer had been the frontrunner and thus continually battered by three feisty opponents—Robert Reich, who was Bill Clinton's labour secretary, Tom Birmingham, the president of the state Senate, and Warren Tolman, a former state senator. Now she faces an even tougher challenge in Mitt Romney, the Republican candidate.

In the end, nothing that Ms O'Brien's rivals threw at her would stick. When her opponents noted that the value of the state pension fund she oversees had plummeted in recent months, voters looked at their own sagging mutual funds and decided it wasn't her fault. When rivals pointed to her less than swingeing views on gun control, voters decided it didn't trump her liberal stances on other things.

In fact, Ms O'Brien and her opponents shared the same leftish views on most issues. The primary battle seems to have been decided on the basis of personality and the ability to bring out the voters in a year of dismal turnout. Ms O'Brien had the advantage of a strong field operation; she comes from a prominent political family, and she was the only candidate to have won a statewide race. She was also the only woman in the race. Women favoured Ms O'Brien over her male rivals, by a margin of nearly two-to-one.

If she wins, Ms O' Brien would become Massachusetts' first elected female governor. (The current, somewhat unpopular Republican incumbent, Jane Swift, was elevated to the position from lieutenant governor—and is not running again.) Ms O'Brien's success was duly hailed the next day by Emily's List, a women's group that supports abortion rights, which wants this to be “the year of the woman governor”. There are only five at the moment, and three are leaving office; but nine are running this year, including Jennifer Granholm in Michigan (see article).

All very inspiring; but first Ms O'Brien must get past Mr Romney. The businessman, who is as handsome and fluent to his supporters as he is artificial and glib to his opponents, has a big lead in the polls and brimming campaign coffers. He has used his successful stewardship of the Winter Olympics to pitch himself as an outsider. As Ms O'Brien celebrated, Mr Romney mocked her years in government and appealed to supporters of Messrs Reich and Tolman, who had dubbed themselves reformers, to join “another team that's willing to go up against the insiders.”

With Republicans accounting for only 14% of the Massachusetts electorate, Mr Romney needs crossover votes. His main targets are independent voters who make up nearly half the electorate. To lure them, he will call in help from the Bush family, while Ms O'Brien will bring in Bill Clinton and Senator Ted Kennedy. Mr Kennedy clobbered Mr Romney in 1994, by painting him as an uncaring businessman who didn't understand working-class needs. But Mr Romney is a more polished act nowadays, and Massachusetts is far more annoyed with its political establishment. The rested Olympian outsider should see off the exhausted female insider.

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The California governor's race

Blues of the Greens

Sep 19th 2002 | LOS ANGELES
From The Economist print edition

An invigorating candidate is unjustly pushed to the sidelines

PETER CAMEJO hates to be called a spoiler. As the Green Party candidate for governor of California in the election on November 5th, he is often warned that he could end up helping Bill Simon, the Republican candidate, to defeat Gray Davis, the incumbent. That, claim his Democratic detractors, is exactly what Ralph Nader did to Al Gore in Florida.

On the face of it, there is no danger of that happening in California. A Field poll released on September 5th gave Mr Davis a lead of seven percentage points over Mr Simon, considerably larger than the 3% of voters who supported Mr Camejo. But the poll also showed 22% undecided, a share that has risen—at a stage in the campaign when opinions would normally be becoming firmer, not softening—from 16% in July. And both the main candidates have higher negative than positive ratings.

That makes Mr Camejo a potentially dangerous man as far as the governor is concerned. It is a familiar position for him; back in the 1960s, when he was a leader of the student radicals at the University of California at Berkeley, the governor of the day, Ronald Reagan, named him one of the ten most dangerous men in California. As a first-generation Venezuelan-American, Mr Camejo could broaden the appeal of the Green Party among Latino and minority voters who, up to now, have disproportionately backed the Democrats. According to Mike Madrid, a Republican consultant, one-third of Latinos say they dislike both candidates from the main parties—the highest share ever to do so.

That threat and potential explain a lot about what happened in Beverly Hills on September 17th, when Mr Camejo and Mr Simon—but not Mr Davis—took part in one of the only debates of the campaign. Showing up to a debate with Mr Camejo would not help the governor (who has agreed to debate Mr Simon only once). Mr Davis would have had to bear the brunt of Mr Camejo's attacks, and his presence would have guaranteed more media attention.

The audience for the debate was small; but it was both larger than Mr Camejo can normally reach and slanted to groups he hopes to impress, ethnic-minority businessmen and media folk. Mr Camejo duly stressed not only environmental issues but education, workers' rights (including a minimum “living wage”), universal health-care and a shift away from “three-strikes” laws towards rehabilitation—all of which may well endear him to poorer Californians. For good measure, he also got in many a dig at corporate crime.

Yet Mr Camejo is no anti-capitalist. He founded Progressive Asset Management, a financial advisory firm that applies stringent environmental, social and ethical criteria to investment. Mr Simon's background is also in investment management (to his delight, a fraud verdict against his family investment firm had been thrown out of court a few days earlier) and the two financiers were positively fulsome in their gratitude to each other for showing up. A common enemy is a wonderful bond.

Mr Camejo knows he has no chance of winning, nor even, probably, of helping Mr Simon to win. At best, his campaign may raise the profile of the Greens a little. California already has 51 Greens in local offices, including four mayors. Michael Feinstein, the Green mayor of Santa Monica, notes that many local elections employ systems such as instant runoff voting, approved this year by San Francisco, that give minor parties a greater say. Mr Camejo wants IRV extended statewide. He still wouldn't win, but at least Mr Davis might deign to debate him.

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About sponsorship

The victims' fund

De factos of the matter

Sep 19th 2002 | NEW YORK AND CAMBRIDGE, MASSACHUSETTS
From The Economist print edition

New York's first amendment: don't stiff the rich, they tend to sue

IN PRINCIPLE, it was a great idea. Last September, Congress passed a bill creating a federal fund to compensate the families of the victims of the September 11th attacks. They were encouraged to sign up with the promise of quick, guaranteed payments, and the fund was supposedly unlimited in size. In exchange, claimants had to waive their right to sue for damages in civil suits stemming from the attacks.

Things are not working out as planned. Few of the eligible families have filed claims to the fund. Of the 43 awards that have been offered to families, five are being contested. Now Cantor Fitzgerald, a bond-trading firm that lost 658 employees in the World Trade Centre, has filed a brief to the fund's master, Kenneth Feinberg, saying his terms are unjust and illegal.

Like many of the victims, Cantor thinks the fund is paying less than the courts would. Payments from life insurers or pension funds are deducted from the fund's award, though a court awarding damages in a wrongful-death suit would not “offset” payments in this way. The fund also calculates its awards after deducting tax, while New York courts award tax-free amounts. And Cantor in particular claims that, because its business was booming, its employees would have made far more money than the fund thinks.

The angriest families are the richest ones. If a victim was even modestly wealthy, the “offset” rule alone probably wipes out most of the award that the fund might offer. Because of the way the awards are computed, all the families of victims with incomes above the 98th percentile in the national averages may well be offered the same amount, even if the victims' incomes were wildly different. Cantor also claims that, despite Congress's assurance that there would be no cap on the awards, both the rules of the fund and comments made by Mr Feinberg suggest that a de facto cap exists.

By ignoring the financial profile of the victims, Mr Feinberg has created a situation where a tenth of his constituency has nothing to lose by fighting him. Cantor's death toll alone includes more than 250 people whose incomes were above the 98th percentile threshold. Cantor's boss, Howard Lutnick, is a notoriously litigious man. His firm's report lays out a long list of reasons why Cantor families may be able to challenge the fund in court. Another group of victims' families is trying to coax a bill through Congress that would eliminate the offsets for other income and remove the cap on pain-and-suffering awards made by the fund.

Meanwhile, the civil suits are mushrooming as well. The office of New York city's Corporation Counsel has hired two dozen new lawyers to defend against claims that it fears could reach into the billions. Just before the one-year deadline on filing wrongful-death suits expired, more than 1,000 plaintiffs filed a civil lawsuit against the Port Authority of New York and New Jersey, charging it with negligent construction and maintenance of the twin towers. The judge overseeing the case allowed the families to file the suit while retaining the option to drop it and file for compensation from the fund.

Earlier this month, in a lawsuit seen by some critics as so far-fetched that it is almost recreational in nature, around 1,500 plaintiffs filed a suit against Saddam Hussein, on the basis that the Iraqi dictator supported al-Qaeda. When “terrorist regimes” have been found liable in other cases, the Treasury has had to pay the bills. Congress is sure to close that loophole. But one way or another, the taxpayer will have to cough up.

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Barely legal rural pursuits

Cock and bull

Sep 19th 2002 | HOT SPRINGS, ARKANSAS
From The Economist print edition

An old sport survives

AP

You calling me chicken?

GAME-BREEDERS who raise roosters for cockfighting are secretive and sensitive souls. When they gather for their annual convention (this year, at the Arlington Resort Hotel and Spa in racy Hot Springs, Arkansas), they do not want media intrusions. That is because the sport they supply is not always on the right side of the law.

Cockfighting, better known as the “sport of kings” (at least in these kingless parts), is legal only in Oklahoma, Louisiana and New Mexico. In 27 states, it is a felony. Where cockfighting is illegal, it has naturally gone underground—or rather, on to the back-roads and into dusty fighting pits in corrugated-iron sheds. There, two gamecocks, armed with razor-sharp gaffs and often drugged, are placed in a pit to attack each other, while spectators gamble on the outcome. One bird is usually killed; sometimes both are. The sport is popular, especially among Latinos, and the police have a hard time stamping it out.

In Arkansas, where cockfighting was banned in 1879, the sport still flourishes. (It is only a misdemeanour under Arkansas law, but a proposal on November's ballot seeks to have it re-classed as a felony.) Two of America's biggest cockfighting magazines—the *Feathered Warrior* and the *Gamecock*—are based there. The barkeepers of Hot Springs are happy to take the dollar of the United Gamefowl Breeders Association (UGBA). And hundreds of Arkansas farmers raise the birds, inbreeding them to make them more aggressive, for sale across the state line.

Earlier this year, Congress passed an act that outlaws interstate shipping of game birds for sports such as cockfighting. It comes into force in May 2003, and already ways are being found round it. Some poultry farmers simply say they will defy the law and go on shipping birds. Several have already started smaller farms in Louisiana where they plan to raise chicks for profit. They also ship birds to Mexico and parts of Asia.

If Arkansas makes cockfighting a felony in November, and if neighbouring Oklahoma (which also has the issue on the ballot) makes it illegal, both states could lose a lot of money. According to the UGBA, raising game fowl is a $4 billion industry, involving about 300,000 family farmers across the country. That includes people who breed other birds such as pheasants. But the breeders insist that even the cocks are not merely bred for fighting; the feathers are also used for fishing-flies and in Native-American dance rituals. And no doubt a dance ritual is what is going on in that old metal shack down the road?

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Lexington

Jennifer flowers

Sep 19th 2002
From The Economist print edition

A woman in Michigan shows there is life left in Clintonism

INCUMBENTS normally have it easy in American politics. The exception this year is the gubernatorial races. With finances in most states in a parlous condition, voters are looking for somebody to blame for the mess. This may be bad news for the Republicans, who have picked up a string of governors' mansions over the past decade. Loyalty to George Bush's stance on Iraq may prop up the odd Republican congressional campaign, but it will not help state politicians. A particularly precarious position to be in is that of a Republican lieutenant-governor trying to get promoted. You tend to get the flak for being part of the ruling administration, without the personal following of your boss.

All these things help explain why life was always going to be tough for Lieutenant-Governor Dick Posthumus, the Republican who is trying to succeed John Engler in Michigan, a swing-state which, according to some locals, is suffering from Engler fatigue. But they do not explain the rise of his Democratic rival, Jennifer Granholm—and the possible problems that candidates like her could spell for the Republican Party.

To hear Democrats talk about it, Ms Granholm is the most exciting thing in Michigan politics since Gerald Ford (well, you know what we mean). Young, clever and telegenic, she currently holds a 12-point lead over Mr Posthumus in the polls. Although she has been the state's attorney-general for a mere four years, Ms Granholm leapt into the national spotlight when she clobbered two veteran bruisers in the Democratic primary—Congressman David Bonior and James Blanchard, Mr Engler's predecessor (and the only Democratic governor in four decades). Ever since then, money has been pouring into her campaign. She has even been endorsed by American Women Presidents, a group that promotes female candidates for the White House (despite the fact that Ms Granholm was born in Canada, which rules her out).

A former beauty queen who graduated from Berkeley and Harvard Law School, Ms Granholm might have been expected to do well in, say, California. Michigan—the home of the United Auto Workers and machine politics—seems an odd place not just for Ms Granholm, but also for her message, a sort of new-age, policy-wonkish pragmatism. She sticks to the centre, making much of fiscal responsibility and the targeting of help to families and small businesses. She also tends to use words like “holistic”. Her 20-point win in the primaries was built on support from three groups: baby-boomers, women of all stripes and independents. That trio trounced Michigan's traditional Democratic powerhouses, the big trade unions and urban black groups, who both largely backed her opponents.

Centrist politics, charm, even a fondness for new-age jargon: it is hardly surprising that Ms Granholm is being compared to a certain recently retired baby-boomer. Bill Clinton rose to prominence as a reformer who wanted to turn the Democrats from a party of workers to one of consumers, who wanted to talk

about softer issues like education and the environment (both Granholm themes), who wanted to bring in women. Last week, the old rogue came to bestow his blessing and lure in more black voters. “I'm getting used to standing around and listening to attractive, blonde-haired women talk,” Mr Clinton joked to 3,000 cheering supporters in Detroit.

The Republicans were only too happy for Mr Clinton to be there—and not just because Ms Granholm, who usually goes to some lengths to play down her looks and gender, probably did not want to be reminded of them yet again. Outside the Detroit rally, protesters held signs with slogans like “Who's coming next? Ted Kennedy or Gary Condit?”. Mr Clinton's personal approval-ratings are lower than those of any other living ex-president. Republicans talk about him as a confidence-trickster.

Cunning old Mr Posthumus has tried to depict Ms Granholm as slippery, shallow and more leftish than she appears. “Let's just say I've got different values than come from Hollywood, Berkeley and Harvard,” he says, pointing to his farm upbringing in western Michigan and to his love of hunting and fishing. On Ms Granholm's plan to “tweak” Proposal A, a 1994 initiative that largely shifted public-school funding from the property tax to the sales tax, Mr Posthumus snipes: “You don't need a decoder ring to know that means raising taxes.” He is also playing on fears about Ms Granholm's limited experience. Can somebody who so often uses clichés such as “think outside the box” really be trusted with dour old Michigan's looming budget deficits?

The diciest issue for Ms Granholm may be abortion. Although she is a committed Catholic, she also supports abortion rights. Earlier this month there was a scene at her local church, with anti-abortion protesters waving gruesome photographs in the faces of parishioners. The Michigan Catholic Conference has also issued an election paper calling abortion “the pre-eminent threat to human dignity”. Michigan's huge block of independent female voters may have difficulty judging her primarily as Jennifer the feminist attorney-general or Jennifer the Catholic mum.

It's still Bill's backyard

Such questions suggest that the Democrats' claims that this contest will simply be a re-run of Mr Clinton's slaughter of Bob Dole are misplaced. Even Ms Granholm's friends concede that she is not the finished article. But she should still scare the White House—and not just because it does not want a Democrat governor in a swing-state like Michigan. She shows that Clintonism still has a pull—especially among the independents who decide elections. Iraq may be grabbing the national headlines, but on a whole range of economic and social issues, Americans still seem to sympathise with Mr Clinton. They want modern-sounding, non-ideological answers to problems. The man may have taken a battering, but the message still works well, especially when it comes with charm and a touch of glamour.

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Brazil's presidential election

Lula scents victory at last

Sep 19th 2002 | SAO PAULO
From The Economist print edition

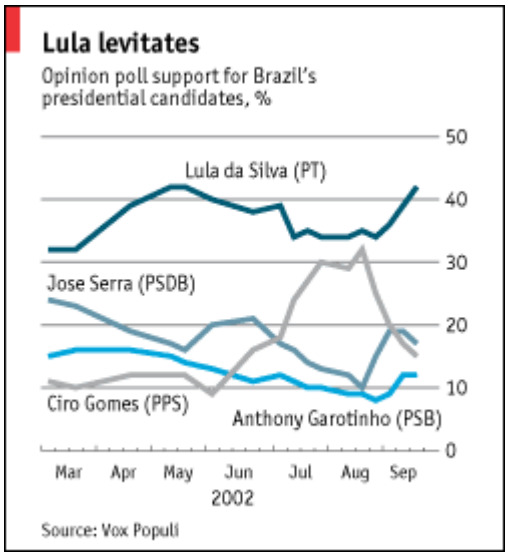
Reuters

In a campaign full of surprises, the left-wing front-runner now looks almost unbeatable

Get article background

BY THIS stage in Brazil's past three presidential elections, with the vote just a fortnight away, Luiz Inacio Lula da Silva of the left-wing Workers' Party (PT) was trailing in the opinion polls, heading for defeat. But in those elections it was the radical, jeans-wearing, trade unionist Lula who was running. Brazilians, more conservative than some of their neighbours, rejected him. This year, Brazil's eternal candidate is a new, centrist Lula in a suit, pledging to run the government's finances sensibly. The makeover is working. This week's polls showed Mr da Silva extending his big lead over Jose Serra, the candidate of President Fernando Henrique Cardoso's centre-right alliance (see chart). Allowing for blank and spoilt ballots, two polls suggest Mr da Silva would get 48% of the valid votes—close to the outright victory needed to avoid a run-off ballot.

In the past two elections, in 1994 and 1998, Mr Cardoso won outright, on the back of his inflation-busting *real* plan. Mr da Silva has no such big idea to offer. But his moderation and Mr Serra's lack of charisma are encouraging many Brazilians to trust in their desire for a change. Investors would prefer continuity: the *real*, Brazil's currency, and the country's bonds have slumped in recent months. A $30 billion IMF loan package announced last month gave some respite. But the markets tumbled again on this week's poll news.



Since much of Brazil's public debt is tied either to its falling exchange rate or its high interest rates, the debt burden has risen from 53% to 62% of GDP in the past year. If only investors could be convinced that the debt would remain manageable under a Lula government, the *real* would rise and interest rates fall, thereby lowering the cost of debt service. Otherwise, the debt could become unbearable.

Mr da Silva and his advisers are trying hard to win investors' trust: far from threatening to rip up the IMF accord, as they once would have, they nodded it through. They say they would keep a fiscal surplus, before interest payments, sufficient to stabilise the public debt. And they promise to keep Brazil's system

of inflation targeting, though they might loosen its central target by a couple of points.

But Mr da Silva still cannot resist making big spending promises. This week, he pledged to double the value of the minimum wage in four years. Since it determines state pensions and the pension system already has a deficit equal to 4% of GDP, this would be unaffordable without a drastic social-security reform—something Lula's advisers admit will be tough.

The markets would be likely to test a Lula government in its first year, obliging it to keep interest rates high, constraining growth. That might require an even tighter fiscal policy to stave off debt default. But Guido Mantega, Mr da Silva's economic adviser, says the public and the party's militants understand that its promises cannot be fulfilled at once. He points to Sao Paulo: Marta Suplicy, the city's PT mayor since 2000, inherited big debts, and has ridden out demands for early spending.

Mr da Silva's team recognise the value of trying to reassure investors with early confidence-building measures. Mr Mantega says they would push for immediate approval by Congress of a long-delayed tax reform, even before the new government and legislature take office in January. Another key test would be the choice of finance minister and central-bank governor. The PT has few people with experience of international financial markets. However, investment bankers and officials at multilateral agencies praise Mr da Silva's team for being keen to listen. Intriguingly, Senator Aloizio Mercadante, an economist and one of Mr da Silva's closest aides, recently ran a poll on his website asking if Arminio Fraga, the current central-bank chief who has investors' trust, should stay. A slight majority said yes, at least for a while.

Mr Mantega says that Mr da Silva would continue with Mr Cardoso's public-sector reforms, and some of his infrastructure and social projects. There would be less privatisation. But Mr da Silva would be prepared, for example, to let private firms run water services. The main difference would be a greater willingness to intervene, in matters such as the controversial recent purchase by Petrobras, the state oil firm, of drilling platforms from Singapore. The PT would take into account the broader effects of such decisions on jobs and tax revenues, says Mr Mantega. And it would be more willing to use tariffs and taxes to favour Brazilian industry over foreign producers.

If he wins, Mr da Silva's choices of policy and ministers would also be shaped by the coalition he would have to form to govern. The PT may win only about 80 of the 513 seats in Congress's lower house. Paradoxically, its most logical partners are Mr Serra's current alliance, of Mr Cardoso's Social Democrats and the catch-all Brazilian Democratic Movement. Many leaders of both parties were alongside Mr da Silva in opposing Brazil's 1964-85 military dictatorship, before moving to the centre.

All sides admit such a marriage of convenience is possible, though it would be difficult: Mr Serra launched fierce attacks against Lula this week, in an effort to ensure a run-off ballot. Mr Serra's supporters insist that a run-off would be a wholly different race. They would hope to pick up votes from defeated candidates by casting doubt on the sincerity of the PT's move to the centre and Mr da Silva's fitness to govern. Maybe. But Mr Serra is not closing the gap and there is only three weeks between the two rounds of voting. Lula has begun to look like Brazil's next president.

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Crime in Brazil

Maximum insecurity

Sep 19th 2002 | SAO PAULO
From The Economist print edition

Getting caught is no problem for Brazil's gangsters

Reuters

Fernandinho's bloody playpen

BANGU 1 prison in Rio de Janeiro is supposed to be one of Brazil's most secure. That did not stop its most notorious inmate, Luiz Fernando da Costa (alias “Fernandinho Beira-Mar”), the city's most powerful drug dealer, from obtaining guns and a full set of keys last week, apparently by bribing warders. Mr da Costa and members of his “Red Command” gang then passed through six security gates to the other end of the prison, where they murdered the leader of a rival gang and three henchmen.

The audacity of Brazil's criminal gangs, and the impunity they enjoy even behind bars, is chilling. In July, inmates at a Sao Paulo prison were found to be receiving deliveries of cannabis and pizzas. At another, in January, two prisoners arranged for a hijacked helicopter to collect them from the prison yard.

Prisons and most policing have long been in the hands of state governments. Under a grand anti-crime plan launched by President Fernando Henrique Cardoso in 2000, top-security federal jails were to be built for people like Mr da Costa. But only one has been built, in Amazonia. Disappointingly, public security is not a big issue in next month's presidential election. The main candidates all promise more federal police and tougher sentences. But they seem reluctant to push reforms to modernise the inefficient courts, or to require the states to merge their two rival police forces.

However, insecurity is stirring up races for state governorships. In Sao Paulo, Paulo Maluf, a conservative populist, promises harsher prison regimes and “violent” police patrols to repress crime. This week, Geraldo Alckmin, who is seeking re-election as Sao Paulo's governor, fulfilled a pledge to close Carandiru, a squalid and escape-prone jail. But that has meant crowding at other prisons. Mr Alckmin is building new ones; even so, prison numbers are rising faster than new cells. Mr Alckmin also boasts that his police gunned down 12 members of a prison gang which dominates organised crime in Sao Paulo.

Will that be Mr da Costa's fate? He was arrested last year in Colombia, for trading guns for cocaine with the FARC guerrillas. The justice ministry now proposes putting him in a military jail. No thanks, says the defence ministry. Nobody, it seems, will cage this beast.

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Human rights in Guatemala

The army on trial

Sep 19th 2002 | GUATEMALA CITY
From The Economist print edition

A bid to bring the generals to book

IN WHAT looks like a student lecture hall in the concrete bowels of Guatemala's Supreme Court building, lawyers confront each other behind flimsy trestle tables. Despite the simplicity of its surroundings, the trial of three retired army officers which began this month is historic. It is the first time that senior officers have faced justice for crimes committed during a 36-year “dirty war” against left-wing guerrillas that left 200,000 dead, most of them killed by the army.

The officers, a general and two colonels, are accused of ordering the murder in 1990 of Myrna Mack, an anthropologist and human-rights campaigner. She was stabbed 29 times in the street only a few hundred yards from the presidential palace in Guatemala city. In 1993, a soldier in the army's elite presidential-security division (EMP), which functioned as a death squad, was convicted of killing Ms Mack. But he was merely the executioner.

Though the dirty war ended with a 1996 peace deal, and civilian governments had replaced dictatorships a decade before that, the army remains the most powerful political force in Guatemala. So the trial comes as a surprise—all the more so since the three defendants are in prison and have been refused bail. For the first time, the army's order of battle and methods are being revealed in public. This evidence has been pieced together from declassified American documents by Kate Doyle, an analyst at the National Security Archive, an NGO in Washington DC, who has been called as a prosecution witness.

But the trial, which is expected to end this month, is likely to be “an exception rather than the rule”, according to Nery Rodenas, the director of the Archbishop of Guatemala's office of human rights. That is because Ms Mack's case has had an extraordinarily tenacious champion in her sister, Hellen Mack, a lawyer who has brought it to international attention.

Those such as Mr Rodenas and Ms Mack, who attempt to investigate the crimes of the past, face threats and violence. Such intimidation has increased since the conviction last year of three officers from the EMP for the murder in 1998 of Bishop Juan Gerardi. The bishop was killed days after he had presented a church report on the dirty war. In May, an accountant at the Rigoberta Menchu Foundation, which pursues prosecutions against former military officers, was killed. A witness in the Mack case was flown in from Canada, where he fled after death threats.

The peace accord called for the disbanding of the presidential-security division. President Alfonso Portillo has frequently promised to do so (most recently in July), but this year increased its budget. In practice, it is not Mr Portillo who decides such matters but Efrain Rios Montt, a former military dictator during the most repressive phase of the war. He is now president of Congress, and the leader of the ruling party. Human-rights groups want him prosecuted for genocide. His supporters want to lift a constitutional ban on dictators standing for president, in time for an election in November 2003. Guatemala's future will depend on which side wins.

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Colombia's conflicts

Calling up reinforcements

Sep 19th 2002 | BOGOTA
From The Economist print edition

Can new forces of auxiliaries and informers bring greater security?

Reuters

A fistful of pesos for a friendly neighbourhood informer

DURING his campaign for the presidency, Alvaro Uribe made some eye-catching but controversial promises to his wartorn country. He said he would organise a million citizens to support the armed forces, bring in tougher anti-terrorism legislation, and double the numbers of police and professional soldiers. The voters duly gave Mr Uribe a clear mandate to impose authority. Having taken office just six weeks ago, he has lost no time in implementing these plans. Already, human-rights groups are worried. The president, a 50-year-old independent Liberal, is unrepentant. “The policy is not to silence the critics, it's to confront violence,” he says. “There'll be no going back.”

Colombia's security forces face three main threats: two left-wing guerrilla armies, with a combined strength of perhaps 23,000 fighters; fast-growing rightist paramilitary militias numbering around 10,000, who receive tacit support from some military officers; and the drug trade, which provides finance to the illegal armies. All these forces have profited from the weakness of the democratic state.

Andres Pastrana, Mr Uribe's predecessor, had begun to strengthen the armed forces: their numbers rose from 117,000 to around 140,000, and those of professional soldiers from 23,000 to 55,000. Thanks in large measure to American military aid, the army now has a large helicopter fleet. Hitherto, the American helicopters have been restricted to action against the drug trade. Now, the United States' Congress has agreed in principle to their use for counter-insurgency. First, however, Colombia has to come up with a formal national security strategy, which will probably happen by the end of the year.

Despite these efforts, the security forces control only about half of the vast country. Of 1,100 municipalities, 180 (some covering thousands of square miles) lack any police or army presence. The new government aims to station units in all of these places within a year, says Martha Lucia Ramirez, the defence minister. That means recruiting 40,000 extra troops by March.

But finance is tight: Colombia's fiscal deficit is climbing (it may reach 4% of GDP this year, up from 3.2% last year). Because of opposition from business, Mr Uribe has scaled back plans for tax increases. On September 16th, trade unions staged a strike against public-spending cuts and planned labour and pension reforms.

To save money, the government has reached back to a 1993 law which allows the army to recruit part-time conscripts as auxiliary police and soldiers. These auxiliaries will account for 15,000 of the new troops. They will be subject to military regulations, but will live in their homes. Human-rights watchdogs fear that they could turn into paramilitary death squads. Another fear is for the safety of the conscripts and their families, since they will lack the protection offered by a barracks or police station. “In the future it is desirable that the army is completely professional,” Mrs Ramirez says. “But we know that is difficult in the short term.” She argues, too, that locally-resident auxiliaries will enjoy more civilian support in hostilities against the guerrillas than troops or police posted randomly to distant areas of the country.

Another of Mr Uribe's initiatives is also aimed at encouraging civilians to co-operate with the armed forces. In Cesar, Magdalena, and La Guajira, three departments in northern Colombia, police have called on civilians to volunteer to be informers, passing on information about rebel movements or attacks. The

police claim that this scheme has already improved highway security. The idea is to roll out such networks across the country, as part of the target of 1m civilian collaborators. In addition, Mr Uribe has declared Mondays to be “reward days”, in which star informants get cash handouts. But even police chiefs acknowledge the danger that informants could be settling local scores or setting traps.

The third prong of the new strategy is tougher laws. Acting under a temporary state of emergency imposed by Mr Uribe after the presidential palace was shelled by guerrillas during his inauguration, on September 10th the government issued decrees that give the security forces wider powers to search and detain suspects, to intercept communications, and to declare war zones in which freedom of movement can be curtailed and foreigners excluded. (This week three Spaniards on tourist visas were expelled, after joining protests linked to the strike.) Mr Uribe is likely to want to make these measures permanent; if so, they could be blocked by the Constitutional Court. Some politicians who support the state of emergency are nervous of sweeping state powers.

The United States, which is expected to offer Colombia $500m in mainly military aid for 2003, supports Mr Uribe's policies. Human-rights groups do not; they say the army has abused similar powers in the past. They also worry that Luis Camilo Osorio, whom Congress named to the independent post of attorney-general last year, has dropped investigations of abuses by army officers. Mr Uribe insists the emergency measures are not about suppressing human rights: they are about making people observe the law. “We respect controversy,” he insists. Just as well.

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Japan and North Korea

Not yet friends

Sep 19th 2002 | TOKYO
From The Economist print edition

Junichiro Koizumi may yet pay a price at home for his trip to North Korea

Get article background

WHEN its prime minister announced last month that he would make a historic trip to North Korea, Japan was abuzz with talk of a breakthrough on the sorest sticking point between the two countries: the dozen or so Japanese nationals whom North Korea stood accused of abducting in the 1970s and 1980s.

In the event, the revelations emerging from the hermit kingdom on September 17th were more stunning—and more disturbing—than had been imagined. Though there was plenty for the diplomats to get their teeth into, in the shape of a promised extension to North Korea's missile-testing moratorium, and reports of (yet another) promise to re-connect the Koreas by road and rail, it was news of the disappeared that grabbed popular attention in Japan. Junichiro Koizumi's day in Pyongyang—the first visit there by a Japanese prime minister—yielded good tidings for four lucky Japanese families, but relatives of eight other abductees were told, along with a horrified nation, that their loved ones are dead.

One poll showed Mr Koizumi's ratings had surged 10% overnight, but as the news sinks in, some observers fear a backlash that will complicate efforts to reach out to Kim Jong Il's regime. Something similar happened to South Korea's president, Kim Dae-jung, in his dealings with the North. Though North Korea has always denied it, Mr Kim now admits that elements of his regime did indeed kidnap a number of Japanese nationals, some of them straight from Japan's beaches, and smuggled them back to North Korea. The youngest, Megumi Yokota, who is among the dead but is said to have a surviving daughter born in North Korea, disappeared after badminton practice in 1977, at the age of 13. Mr Kim claims that uncontrollable bits of his regime did this without his knowledge, and used the abductees to teach Japanese language and customs to North Korean spies.

For all the security risks that North Korea poses to its neighbour, the abductions have long been the most emotional and contentious issue in the eyes of most Japanese. Indeed, before this week's visit the worry of many Asian security experts, and especially of Japan's American allies, was that Mr Koizumi might be willing to go soft on Mr Kim in exchange for the public relations coup of bringing a few of the abductees home. Yet even though the four survivors remain in North Korea, and though Mr Kim provided no details about the eight who have died (all, he says, of natural disasters or natural causes, young though they were), Mr Koizumi carried on with the talks before signing a joint statement with Mr Kim that many Japanese may find hard to fathom.

Though Mr Koizumi did not cave in to longstanding demands for war reparations, the statement declares

that Japan “honestly admitted the historical facts that it had inflicted huge damage and sufferings upon the Korean people during its past colonial rule”. It then goes on to mention, “in the spirit of the declaration”, that Japan will be bestowing some economic aid on its beleaguered neighbour. The statement also mentions that the two sides will “exert all efforts to establish diplomatic ties at an early date”. They are already planning for talks to begin next month. Though Mr Koizumi strongly denounced the deaths of the abductees, his decision to carry on making history, rather than turning round and heading home, blurred his message.

With no joint statements to sign, lawmakers back in Japan had an easier time finding their voice. Members of Mr Koizumi's coalition will no doubt be hounding him to learn more about the eight deaths and demanding some compensation for the families, even as he negotiates with North Korea on other issues of aid and security. All of this will tend to complicate Mr Koizumi's job in two different ways in the coming months.

First, he will find his simple one-day excursion into foreign affairs has become a bigger distraction than he counted on. Until now, Mr Koizumi has hardly been a foreign policy prime minister. He chose his first foreign minister, Makiko Tanaka, because of her popularity and her willingness to talk tough to bureaucrats, even though she showed little patience or talent for statecraft. His trips to neighbouring countries have gone relatively unnoticed, and his handful of meetings with George Bush have been designed to show off their friendship while avoiding important issues. Though he will no doubt leave the details of North Korean talks to others, Mr Koizumi must now pay attention to how the reporting of those details could affect his image at home.

Restoring that image may also become more difficult. Before his trip to Pyongyang, the betting had been that Mr Koizumi's looming cabinet shuffle will be a mild one, offering few concessions to rival factions in his coalition and leaving him in reasonable control of his team, at least by the standards of Japanese cabinets. But if he carries through with that approach, it will leave him holding more of the blame if a round of by-elections on October 27th goes badly for the party.

He must now hope, therefore, that he can turn the news from North Korea to his advantage, or at least limit any damage, before voters go to the polls. He may yet find a way. He may, for instance, get a boost if and when the four surviving abductees are reunited with their families, though no dates for a reunion have been set. The irony, however, is that Mr Koizumi has already succeeded where his predecessors failed, by returning with precious information about the fate of those who were taken—and yet the truth may hurt him.

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China and the Internet

The search goes on

Sep 19th 2002 | BEIJING
From The Economist print edition

China backtracks on banning Google—up to a point

Get article background

IN CHINESE, the nickname for Google, an American Internet search engine, is *gougou*, meaning “doggy”. For the country's fast-growing population of Internet users (46m, according to an official estimate), it is proving an elusive creature. Earlier this month, the Chinese authorities blocked access to Google from Internet service providers in China—apparently because the search engine helped Chinese users to get access to forbidden sites. Now, after an outcry from those users, access has been restored.

An unusual climbdown by China's zealous Internet censors? Hardly. More sophisticated controls have now been imposed that make it difficult to use Google to search for material deemed offensive to the government. Access is still blocked to the cached versions of web pages taken by Google as it trawls the Internet. These once provided a handy way for Chinese users to see material stored on blocked websites.

After the blocking of Google on August 31st, many Chinese Internet users posted messages on bulletin boards in China protesting against the move. Their anger was again aroused last week when some Chinese Internet providers began rerouting users trying to reach the blocked Google site to far less powerful search engines in China.

Duncan Clark, the head of a Beijing-based technology consultancy firm, BDA (China) Ltd, says China is trying a new tactic in its efforts to censor the Internet. Until recently, it had focused on blocking individual sites, including all pages stored on them. Now it seems to be filtering data transmitted to or from foreign websites to search for key words that might indicate undesirable content. For example earlier this week when using Eastnet, a Beijing-based Internet provider, a search on Google for Falun Gong—a quasi-Buddhist exercise sect outlawed in China—usually aborted before all the results had time to appear. Such a search also rendered Google impossible to use for several minutes.

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China and Tibet

Welcoming lamas

Sep 19th 2002 | LHASA
From The Economist print edition

What lies behind China's charm offensive over Tibet?

AP

Potala imprisoned

SOME gaps are simply unbridgeable, and there are plenty of these to be found in Tibet. Bridges that have been built seem to wash away or fall down quickly. In these spots, the trucks and buses plying Tibet's battered roads must drive down the banks, bump across the river bed, and struggle up the other side. Meanwhile, many of the region's spectacular mountain ravines are simply too dramatic ever to accommodate a bridge of any sort.

There are similarly unbridgeable gaps between China's official account of its magnanimous and tolerant rule in Tibet, and the wrenching tales of thuggery and oppression told in whispers by frightened, wary locals. China's top official in Tibet, a Tibetan by the name of Legqok, assures visitors that Tibetans enjoy complete religious freedom. But in Lhasa's monasteries and temples, the police presence is heavy, and the talk among monks is of beatings, arrests, and forced political education. Legqok himself is dismissed by many as a Chinese stooge.

Since the 1951 takeover of Tibet by Mao Zedong's Communist forces, Tibetans have bristled under (and occasionally, but unsuccessfully, revolted against) their Chinese masters. Staking what it considers an “indisputable” and “ancient” claim to sovereignty over Tibet, China has sought to modernize the place in the hope that rising prosperity, eventually, will be enough to win grudging acceptance by Tibetans of their fate.

There are some signs that this strategy might be starting to pay off. This month, for the first time in nearly a decade, representatives of the Dalai Lama's Tibetan government-in-exile have been hosted—both in Beijing and in Tibet—by the Chinese government. Little has yet been said about it by either side, but the visit, together with a few other recent signs of Chinese softening, has given rise to new hopes that a genuine rapprochement may be on the cards.

Earlier this year, China released six Tibetan political prisoners, and it allowed the Dalai Lama's brother, Gyalo Thondup, to visit Tibet. After years of sharply restricting access to the region by outside observers, Chinese officials have since the summer invited two large groups of foreign journalists on (admittedly heavily-escorted) reporting trips.

According to Thubten Samphel, spokesman for the Tibetan government-in-exile that is based in

Dharamsala, in India, the visit of the Dalai Lama's envoys “shows there is some willingness from the Chinese authorities to take steps in the right direction, so from our side we are hopeful that something positive will turn up soon.”

The stakes are undoubtedly much higher for the Tibetans, who have looked on helplessly during the past half century of heavy-handed Chinese rule, and now fear, quite justifiably, that their country and its culture are both being extinguished.

China vigorously denies charges that it seeks to change Tibet by flooding the place with migrants, but it is evident that Chinese migrants are in fact dominating major portions of Tibet's economy; Chinese bureaucrats, as well as soldiers and police, are stifling Tibet's religious and cultural life; and an ambitious Beijing-sponsored development plan, while succeeding in raising the region's standard of living, is at the same time transforming its landscape and browning its unique hues.

The timeless Potala palace survives, but more and more sterile modern architecture is replacing traditional Tibetan buildings, and save for their mountain backdrops, most areas of Tibet's two main cities, Lhasa and Shigatse, are coming to resemble a provincial Chinese town. Despite the sympathy, and cash, that the Dalai Lama attracts to his cause from foreigners, Tibetans, both in Tibet and in exile, know they stand little chance of getting out from under Chinese control. The survival of Tibetan identity may depend on a deal with the government in Beijing.

Though the stakes are far less high for China, a successful Tibet settlement would count as an admirable achievement for any Chinese leader, putting an end to both the internal and international tension that the issue constantly generates.

China's new initiative could simply be an attempt by China's president, Jiang Zemin, to lighten the atmosphere ahead of his scheduled visit next month to President George Bush's Texas ranch. Some experts, however, think there is more to it than that. It may mark Mr Jiang's attempt to secure some sort of political legacy for himself as he prepares to give up at least some of his three official posts in the coming months.

“If this is just a sop to the West, it is going much farther than ever before. All this hints that something much more significant is in the works. My hope is that some of the Chinese moderates who have been silenced in recent years are having their voices heard again,” says Tom Grunfeld, a Tibet expert, at the State University of New York. Yet, the answer is unlikely to emerge before China's leadership shuffle is complete next year. The likely new president, Hu Jintao, once ran Tibet. Might he be the man to reach a deal with the Tibetans?

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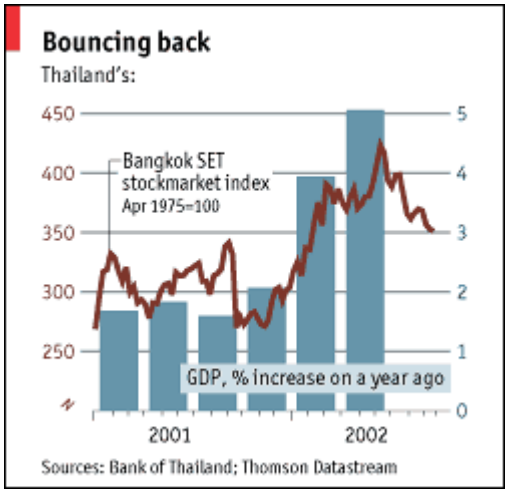
Thailand's economy

Bubbling along

Sep 19th 2002 | BANGKOK
From The Economist print edition

The "ifs" that face the prime minister

MANY Thais, stuck in traffic jams on Bangkok's gridlocked streets, console themselves with the thought that the renewed congestion is a sure sign of recovery after five years of economic difficulty and free-flowing traffic. Car sales, at any rate, are zipping along at their fastest pace since the crash of 1997: Thais snapped up 50% more vehicles in August than they did a year earlier. A combination of low interest rates, easy credit and government pump-priming set the economy growing by more than 5% in the second quarter. To fans of Thaksin Shinawatra, Thailand's billionaire prime minister, the figure vindicates the government's controversial policy of "asset reflation". But critics of Thaksinomics argue that the situation is all too reminiscent of the days before the crash: the government is simply nurturing a brand new bubble, they say.



For the past five years, the burden of excess capacity and bad debts has weighed on Thailand's economy, leaving banks reluctant to lend and firms reluctant to invest. The previous government accepted the conventional economic wisdom that growth would not resume in earnest until the banks and businesses concerned had sold their near-worthless assets, written off their losses and begun to recapitalise. But most businessmen and bankers resisted such steps.

Mr Thaksin took their side, arguing that many investments that looked worthless and loans that looked unserviceable when the economy was stagnant would appear plausible once growth picked up again. Since he took office last year, he has been frantically seeking that growth: providing a soft loan of 1m baht ($23,000) to every village in the country, subsidising the provision of healthcare, announcing a debt moratorium for farmers, instructing state-owned banks to lend more freely, deferring tax rises, introducing cheap mortgages for civil servants, and so on.

At the very least, this spending was supposed to tide Thailand over until the world economy improved, restoring the depleted demand for exports. At best, it was supposed to alter the country's economy permanently, by strengthening domestic demand as a counterweight to the more unpredictable export cycle. The risk, of course, was that the government would simply rack up big debts, thus pushing interest rates up and the economy down, all for a temporary respite.

So far, however, neither prediction has come true. The reflation has gone just as Mr Thaksin envisaged: property values, the stock market and consumer confidence all shot up in the first half of the year, while private consumption grew robustly. But bad debts remain stubbornly high, and investment sluggish. There is little to suggest that the government's spending spree has launched the economy on a virtuous cycle, according to Ammar Siamwalla, a local economist. Yet fiscal ruin is hardly at hand. This year's deficit is likely to fall short of the budgeted 3.8% of GDP. Next year's auspicious 999.99 billion-baht budget reins in spending further. Supavud Saicheua, an economist with Merrill Lynch Phatra, an investment bank, argues that public debt will remain manageable as long as the economy grows by 4% or so.

If the economies of the United States and Japan, Thailand's biggest export markets, pick up next year, the government can continue to reduce spending, without bursting its own bubble. But if, as is equally plausible, a war in the Middle East pushes up oil prices dramatically, or exports contract, or healthcare costs run out of control, Mr Thaksin will face the choice of slashing spending or allowing interest rates to

rise—and doing so in the run-up to parliamentary elections in 2004. That would really leave the prime minister and his countrymen in a jam.

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Agriculture in Afghanistan

The gardens of Eden

Sep 19th 2002
From The Economist print edition

Fighting the drought, and the looters

Get article background

FOR Abdul Hakim, gardening is a family tradition. As his father and grandfather did, he works in the gardens of Nimla Bagh, in Nangarhar province in eastern Afghanistan, which are said to have been laid out in the 1630s as a Persian recreation of Eden. Three years of drought, however, have left their mark on Nimla Bagh, as well as on the country's once prolific orchards and fields. Irrigated areas have shrunk by more than half since 1978, turning a country that was approaching self-sufficiency into a big importer of grains, fruit and vegetables. Restoring Afghan agriculture will be a long task.

Afghanistan's terrain, climate and tradition of gardening make it a good place for growing fruit. In the 1970s, export of fruits and nuts provided about 40% of the country's foreign exchange. About 60% of the world's dried fruit came from Afghanistan. In the 1990s the Food and Agriculture Organisation (FAO) helped to create over 300 fruit-tree nurseries throughout the country to replace orchards destroyed during a decade of occupation by the Soviet Union. Further fighting ruined more of Afghan agriculture, including the vineyards of the Shomali plain. But it was the lack of water—and the lack of money—that devastated the country's orchards, most of which are now in a sorry state. Such fruits and vegetables that are produced are difficult to distribute or export because many of the country's roads and bridges have been destroyed.

Food crops that need less water, such as wheat, are doing better, although the FAO estimates that the revival of poppy growing for opium since the defeat of the Taliban has reduced the area of irrigated wheat by some 10%. The good news is that over the past few months rains have returned to some parts of the country, and food supply should improve. Afghanistan should produce 3.6m tonnes of cereals this year—82% more than last year, but still 4% less than in 1998. Yet about 6m Afghans, (the poor, the displaced, and the masses of refugees who have returned) will still need food aid during the coming months. And it will take a lot more rain to replenish the country's low water table.

It was reported last week that the national seed collection, which reflected the genetic diversity of the country's major crops, had been destroyed by looters who broke into offices in Ghazni and Jalalabad where the seeds were stored. The thieves took the plastic containers and threw the seeds away. However, there is hope for a recovery: since July scientists have been collecting samples of pistachio nuts, almonds and melon seeds. And once the country becomes safer, says Nasrat Wassimi, who heads an international group working on reviving Afghan agriculture, the seeds collected in the 1960s and 1970s and now kept abroad will be repatriated.

In the meantime, the FAO is helping to repair irrigation systems, distributing seeds and surveying those tree nurseries that are worth reviving. In Nimla Bagh, Abdul Hakim is still counting the useful trees remaining in the vast gardens. “My grandson counts beside me,” he says, “and that gives me hope.”

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Sri Lanka

Friendly Tigers

Sep 19th 2002
From The Economist print edition

Peace talks begin with a purr

Get article background

SO FAR, so good. Sri Lanka's government, representing the penitent chauvinism of the country's Sinhalese majority, this week met the ex-terrorist, ex-separatist Liberation Tigers of Tamil Eelam for talks in Thailand aimed at ending the country's 19-year civil war and agreed to talk some more. Both sides had modest agendas for their first direct negotiations in seven years: to continue the normalisation of life in the north-east, which the Tigers claim as the homeland of Sri Lanka's Tamil minority, while skirting touchier issues such as just how the region will be re-integrated into Sri Lanka.

With the help of Norwegian facilitators they succeeded. They set dates for three further rounds of talks. The next begins on October 31st. Meanwhile, the government and the Tigers will set up joint committees to deal with such issues as rebuilding the north-eastern battleground, which the Tigers partly control, starting by removing landmines and resettling hundreds of thousands of displaced people. They also discussed swapping prisoners of war. These agreements will reassure donors that the peace is hardy enough to warrant stepping up aid to the region.

Nonetheless, each side is handling the newborn tenderly. The government, eager to end a war that has killed 65,000 people and stunted economic growth, has tried to steer well clear of issues that might inflame Sinhalese nationalists, still unreconciled to making peace with the Tigers, or that could provoke the Tigers themselves. So there is little discussion yet of just what powers will be granted to a Tiger-dominated provisional administration for the north-east. The Tigers also sound accommodating. Anton Balasingham, their chief negotiator in the Thailand talks, said more plainly than the organisation has previously conceded that it would settle for something short of an independent state.

The Tigers seek regional autonomy, he said. Separation would be a last resort. Since the government has said it will consider any solution short of independence, the negotiations now look safe from collapse at least over this basic principle. If the Tigers are to pull out at any stage they will have to come up with another reason.

Already there is a peace dividend. Both sides are improving their adherence to the terms of a ceasefire that formally began in February. The Norwegian-led Sri Lanka Monitoring Mission reports that violations of the ceasefire fell by 28% between July and August. Shares on the Sri Lankan stock exchange touched a five-year high this week. A dozen foreign cricket teams have come to Colombo, the capital, for a tournament—more evidence, says the government, that peace is paying off.

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The Arab world, Iraq and America

Saddam plays his ace

Sep 19th 2002 | BEIRUT
From The Economist print edition

EPA

And all give thanks for the reprieve, but how long will it last?

Get article background

IRAQ'S midnight decision to welcome back United Nations weapons inspectors has brought immense relief to the region. The relief is not just over the Iraqis being spared attack, at least temporarily. The collective sigh is also a response to America's new interest in going through the UN, and working with, rather than bypassing, its friends in the region. Given that few expect Iraq's reprieve to last very long, this allows America's strained allies time to prepare for a less abrupt endgame than seemed on the cards a week ago.

The relief, naturally, is keenest among ordinary Iraqis, a few of whom are seen celebrating above. Whatever their quiet wish to be rid of Saddam Hussein, their experience of American arms has not been pleasant. The battered Iraqi dinar, whose price against the dollar is the surest measure of public opinion, leapt 5% on the news of the inspectors' return.

The credit of Arab diplomats also rose sharply. They had been bitterly criticised at home for their failure either to hold back America or to persuade the Iraqi regime to co-operate. Iraq's about-face was particularly gratifying to the Saudis, coming as it did within 24 hours of the kingdom's announcement that it could, after all, contemplate joining American action against Iraq. Similar hints by Jordan and Egypt had left the regime in Baghdad extremely isolated.

The Iraqi government worked hard to put a positive spin on its capitulation. The diplomatic letter announcing its decision was careful to state the hope that renewed inspections should be a “first step” towards a comprehensive solution that would include a lifting of sanctions. Until now, Iraq had rejected inspections outside the framework of a wider deal. Tariq Aziz, the deputy prime minister, described it as a “courageous, daring decision” that had exposed American belligerence and spoiled its pretext for war. In street interviews, many Iraqis agreed that the move was cleverly timed to embarrass America.

Yet the feeling across much of the Arab world is that this was Iraq's last ace. Mr Hussein may have done well to hold on to it for so long, but the return of inspectors, while delaying the likely onset of war, still leaves his opponents with a pretty full hand. Whether or not the Security Council imposes a stringent new timetable, backed by threat of arms, the renewed inspections will be far more rigorous than in the past.

Americans have been speaking openly of a scenario whereby an “inspections crisis”, such as being denied

access to a particular site, would help to build the political rationale for an attack. Regional policymakers fear that this will happen soon. Their view is reinforced by the continued build-up of American forces in the region, along with reports that the American tactic for the no-fly zones is to break Iraq's communications infrastructure rather than simply hit air-defence stations.

Interestingly, Iraq showed its awareness of the need to defuse other possible pretexts for war by abruptly dropping a surcharge on oil exports on the same day as it welcomed the inspectors. For the past two years it has been demanding an under-the-table 15-30 cents per barrel from its customers, as a way of bypassing the tight strictures of the UN's oil-for-food programme. Within a day of Iraq's dual announcements, oil sales surged back after having dwindled, ruinously, to a third of normal levels earlier this month.

But Iraq's fellow-Arabs are bending a receptive ear to America's belated charm offensive. Although the move was overshadowed by news from Iraq, the announcement by the so-called Quartet (America, Russia, the European Union and the UN) of a three-phase plan to resolve the Palestinian-Israeli conflict, seemed aimed at soothing Arab fears that this issue is being ignored. The road map is vague, but it represents a first sign that America might pursue George Bush's commitment last year to the creation of a Palestinian state.

America also proved quick-footed in response to a brewing Israeli-Lebanese water crisis. Lebanon has started diverting water from a spring to dozens of parched villages formerly occupied by Israel. Until now, the spring water had flowed unimpeded into Israel. Bellicose comments by Israeli leaders had raised tensions on this already tense border, where the Hizbullah militia, determinedly hostile to Israel, hold sway. By promptly sending a team of water experts to the area, America showed that it is not in the mood to accept a bust-up that would further inflame Arab opinion.

The pay-off for America's new openness to Arab concerns may come in the form of wider backing for some form of “regime change”. Despite deep Arab opposition to an attack on their neighbour, an undercurrent of opinion has begun to see the possibilities of gain. “There could be nothing better than getting rid of Saddam,” says Samir Kadi, a Lebanese engineer, “It's just that, until now, America has seemed to want to make enemies of everyone.”

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Jordan and Iraq

A Big Mac future

Sep 19th 2002 | AMMAN
From The Economist print edition

Behind the political correctness, Jordanians dream of booty

Get article background

EPA

He won the cup, but his fans were rude

LE ROYAL hotel, built with Iraqi money, towers over Amman, a symbol of Iraq's standing in Jordan. At the opening ceremony earlier this month, King Abdullah himself inaugurated what is by far the tallest building on his capital's skyline. For many Jordanians, Saddam Hussein is the kindly fellow who supplies the bulk of their oil needs for free. And so tied are businessmen to their Iraqi partners, that this week, when Iraq sought to forestall an American strike by allowing the UN's weapon inspectors to return, the Amman stock exchange registered its first major jump in weeks.

Even so, things are not as they were. Earlier this month, Iraqi fans dented the goodwill by spitting insults at King Abdullah during a football match against Jordan in Damascus. Days later, Iraq's visiting vice-president, Taha Yassin Ramadan, appeared to confirm the malaise when, after a meeting with the king, he chose a Jordanian press conference to call on the Arab masses to target American interests in the region once the bombing of Iraq began.

Although barely a day goes by without one Jordanian minister or another denouncing American-British belligerence against Baghdad, the doubters remain. Cafés buzz with talk that Jordan will soon be an American military corridor to Iraq. While ministers insist that the country will not be used as a launchpad in a war, their advisers acknowledge that the United States would probably be able to conduct search and rescue missions, and deploy patriot missiles on the Iraqi border.

The truth is that Jordan has little choice. This summer, America overtook Iraq as the prime market for its goods. Exports to America have soared from $7m five years ago to $231m last year, and are set to double this year. King Abdullah has become the most feted Arab leader in Washington.

The press is full of analyses denouncing America's imperialist ambitions. People prophesy doom for the country's tourism, free oil and internal stability if war breaks out. But some officials have begun to relish a future in which Jordan is the chief beneficiary of a pro-American Iraqi regime. Aqaba port, they say, could serve as a prime conduit for rebuilding Iraq; Jordan might receive favoured-trading status with Iraq, displacing Iraq's preferred partners. Some even look to the restoration of Hashemite influence. The vision of Jordan as a miserable sandwich, squeezed between Iraq and America, could come to look more like a Big Mac.

But before they can go for the booty, the Jordanians have to get through a war. It would be a war, said the information minister, Muhammad Adwan, this week, whose effects could be catastrophic. Officials fear that the demonstrations, already planned for once war erupts, could spiral into a fully-fledged East Bank *intifada*. More frightening still, they say, are the intentions of the 350,000 Iraqi nationals already in Jordan, most of them fleeing the burden of sanctions. If only 0.1% of these refugees are Iraqi agents, that would still mean 350 agents. Who knows, asked a Jordanian, what they might be up to?

A measure to raise the cost of an entry visa to nearly 500,000 Iraqi dinars ($170) looks a bit late. Jordan has declared that, should war erupt, it would seal its borders to prevent more Iraqis flooding across. But the UN Relief and Works Agency, which caters for Palestinian refugees, is already turning its attentions

east. Its staff in Jordan have prepared a fleet of 125 vehicles to move an expected build-up at the borders, not just of Iraqis, but Egyptians, Filipinos and Sri Lankan labourers fleeing the fighting. Once the refugees arrive at the frontier, said a UN official, that's it.

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Iran's constitution

Last chance saloon

Sep 19th 2002 | TEHRAN
From The Economist print edition

Iran's president in fighting mood

ENOUGH was finally enough for Muhammad Khatami, Iran's reform-minded president. Having become ineffectual to the point that the conservatives started to like him, he is at last having a proper go at the judges who gag and jail his supporters, and at the conservative-dominated Council of Guardians, which, in its capacity as an appointed upper house, summarily vetoes all reformist bills. The president is required to supervise the implementation of the constitution. So far he has been unable to do so.

Time and again, Mr Khatami has drawn attention to constitutional violations, such as the trial without jury of political prisoners, and the council's spiking of legislation. No notice was taken. So legal eagles in his office are now drafting a bill that, at least in theory, will enshrine his right to step in to prevent or reverse violations. And parliament will soon start debating a second bill, also drafted at the president's behest, which seeks to deny the Council of Guardians the right to disqualify candidates from standing for office. Whether or not either bill becomes law, they are already transforming the political landscape.

From the second bill, reformist parliamentarians hope for job security. Extrapolating from the constitution's requirement that the council “supervise” elections, the previous parliament had mandated it to vet candidates for public office. It is an open secret that it intends to disqualify at least 60 reformist deputies from standing for re-election in 2004. The new bill would hand vetting responsibilities partly to the government, and make the process less arbitrary.

For lack of a consensus

After the 1979 Islamic revolution, informal consultation was the norm between the different offices of state, and disputes were settled by the then supreme leader, Ayatollah Ruhollah Khomeini. Now, the executive and parliament are ranged against the judiciary and the country's un-elected institutions—and Khomeini's successor, the conservative-leaning Ayatollah Ali Khamenei, seems unable to impose a consensus. The resulting confusion has made the anomalies in the constitution, and in some laws, all the more glaring.

Mahmud Kashani, a conservative constitutional expert, accuses Mr Khatami of making a bad situation worse. He claims that the bill now being drafted in the president's office itself violates the constitutional independence of the executive, legislative and judicial branches. Judges, he says, bow only to more senior judges; if the president were to step in, he could be ignored. Also, or so Mr Kashani says, giving the government a say in vetting candidates is a recipe for conflicts of interest. He expects both bills to be rejected by the council, and “political chaos” to follow.

If either bill is vetoed, Mr Khatami has indicated that the government will draft a bill to hold a referendum on the relevant subject. Assuming, as most do, that Mr Khamenei will himself veto the staging of a referendum, the president's friends say he will resign. A bluff, scoff conservatives, noting Mr Khatami's loyalty to the regime, if not its current form.

Reformists say they take the matter seriously; they recall Mr Khatami's resignation as a minister, on a matter of principle, during a previous government. While everyone feels sure that the election law will be vetoed, some expect the council to appease the president by permitting him his “clarified” power to intervene.

On one thing, all agree; the president's resignation would pave the way for a more authoritarian government. But Muhammad-Ali Abtahi, the president's chef de cabinet, defiantly puts it this way. The

bills represent the “regime's last chance”. If they do not become law, “society will pitch its tent outside the constitution”.

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Ethiopia's divided families

Split by a pointless war

Sep 19th 2002 | ADDIS ABABA
From The Economist print edition

Despite peace, Ethiopia's border with Eritrea is still closed

THE war is over, but not for Alemu. He is half-Ethiopian, half-Eritrean, so since the two countries started fighting in 1998, he has found himself unwelcome in both. Before the border became a bone of contention, Alemu's family used to move freely across it. But when the shells began to burst, he was deported from Asmara, Eritrea's capital, on the ground that his father was Ethiopian. When he arrived in Ethiopia, he discovered that his Eritrean mother had been deported to Eritrea.

The shooting stopped in 2000, and an international court ruling settled the border dispute in April. But for those who are still separated, the suffering continues. During the war, an estimated total of 125,000 people were deported from Ethiopia and Eritrea. Many were summarily loaded on to trucks and driven away, leaving their cows and houses behind. Families that were split up cannot easily reunite, because the border remains closed.

Alemu has not seen his mother for four years. He has trouble even exchanging letters with her, because cross-border mail has been blocked. If it were not for the UN, which runs a postal service for divided families, he would not know if she was dead or alive.

Meanwhile, in Ethiopia, he is regularly accused of being a spy, and is nervous enough to ask that his real name not be used. He wants to carry on running the family flour mill, which his mother left behind when she was expelled, but he cannot obtain a licence to do so legally. Nor can he get a telephone or an electricity connection.

Last year, he finally managed to secure an Ethiopian identity card, so he can, in theory, leave town without being arrested. But he often has to bribe police and other officials to leave him alone. Ethiopia's foreign minister described the border ruling in April as a “victory of peace over aggression and violence”. The border had barely budged.

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Zimbabwe's judges

Cuffed justice

Sep 19th 2002 | HARARE
From The Economist print edition

Robert Mugabe nobbles judges, too

WHEN a criminal is in charge, judges can expect a rough ride. Literally, in the case of Fergus Blackie, a retired Zimbabwean justice: he was hauled from his home before dawn, held for three nights in jail, and paraded through the bumpy streets of Harare, Zimbabwe's capital, on an open Land Rover, in handcuffs.

On September 16th, Mr Blackie was charged with obstructing the course of justice and, for good measure, with corruption too. The prosecutor alleges that he acted improperly in ordering the release of a woman convicted of embezzlement. But his real crime may be to have sentenced the justice minister, Patrick Chinamasa, to three months in jail for contempt of court, after he ignored two summonses to answer separate contempt charges. Mr Chinamasa never went to jail, as a more obedient judge overturned the sentence, but he was said to have been offended.

Mr Blackie's ordeal may deter other judges from trying to enforce laws that annoy the executive. It was not the first such warning. Last year, the chief justice, Anthony Gubbay, resigned after receiving death threats. Bearded pro-government militiamen broke into his court shouting: “Kill the judges!”. Mr Chinamasa then told Mr Gubbay that the government would not be able to guarantee his safety if he remained in office. Mr Gubbay took the hint.

Since then, six top judges have resigned or retired under pressure from the government. Their colour seems to have been immaterial: black, white, Asian or mixed-race, what they had in common was their refusal to toe the official line. They were replaced with more pliable types. And just in case this was not enough to secure favourable verdicts, the president, Robert Mugabe, appointed three extra judges to the Supreme Court.

The law is his instrument

Mr Mugabe has gone to great lengths to appear law-abiding, in his way. His government has changed the constitution 14 times and passed laws that effectively criminalise peaceful dissent. After two decades of patronage, the police now routinely refuse to enforce court orders the government does not like, or to investigate crimes committed by its supporters. Dissidents who so much as hold an unscheduled meeting are arrested on the spot.

All this is making it hard for the opposition party, the Movement for Democratic Change (MDC), to contest the local elections which are to be held on September 28th and 29th. More than half of the MDC's candidates have dropped out of the race, either because they were afraid of having their faces pushed through closed windows and their genitals jolted with jumpleads, or because such tortures had already been inflicted on them, according to MDC officials. If the ballot were fair, the MDC would romp home, despite its disarray. But even a party as unpopular as the ruling ZANU-PF will have little trouble winning most of the 1,300 seats up for grabs when it is running unopposed in nearly 700 of them.

At the recent summit on sustainable development, Mr Mugabe won loud applause from third-world delegates by promising to right the wrongs of colonialism by grabbing land from white Zimbabwean farmers and giving it to blacks. Back home, his promises are treated with more scepticism, partly because the beneficiaries of his land handout include his wife and most of his inner circle, and partly because his policies have sparked inflation of 135%, unemployment estimated at 70% and an economic contraction forecast to be 11% this year. The independent media who reveal such embarrassing facts are under attack. Another foreign correspondent was ordered out last week, and last month, a bomb incinerated the offices of Zimbabwe's only independent radio station.

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Russia's foreign policy

Vladimir Putin, friend or foe of the West?

Sep 19th 2002 | MINSK AND MOSCOW
From The Economist print edition

AP

Russia's recent behaviour has made some worry that it is thinking twice about its rapprochement with the West. Probably not so

Get article background

TO A casual observer a year ago, it looked as if the September 11th attacks had made President Vladimir Putin decide to join the West. To a casual observer now, it might look as if he has changed his mind. Having at first stoutly backed America's war on terror, Russia seems to have shifted recently: it has been cool about an invasion of Iraq, uncomfortably warm towards America's “axis-of-evil” countries, and ever more aggressive towards Georgia, where some Chechen rebels seek refuge.

Last week Mr Putin even threatened to bomb Georgia's Pankisi Gorge—something the Georgians have accused the Russians of doing covertly in the past—because that is where Chechens can hide out. Some Kremlin-watchers believe that, under pressure from Moscow conservatives to stand up for Russia's interests, Mr Putin is demanding a quid pro quo from the gunslinging George Bush: we'll let you bomb your enemy, if you let us bomb ours.

In reality, though, Mr Putin's critics both at home and abroad are oversimplifying. Neither his original position nor his current one are the knee-jerk reactions they seem. A pragmatist in foreign policy as in everything else, he had started looking for closer ties with America and Europe, and a bigger role for Russia in international bodies, well before September 11th last year. And his support after the attacks did reap rewards. Both the United States and the European Union awarded Russia “market-economy” status, and the creation of a Russia-NATO council in May marked an about-turn from Russia's previous hostility to the western alliance.

Hardline Russians still complain that Mr Putin has let their country's world position slip—for instance, by allowing American troops into former Soviet Central Asia and by raising too few objections to NATO membership for the three Baltic republics. And in recent weeks Mr Putin did indeed appear to thumb his nose at the Americans. He met the Korean dictator, Kim Jong Il, and there was talk of a $40-billion trade deal with Iraq and of building five more nuclear reactors in Iran.

But the Russian president and Mr Kim had met before (anyway, Mr Kim meets a lot more people than he used to). And it was the Iraqis that brought up the subject of the deal—and probably exaggerated its size. In any event, staying friendly with such traditional allies is pragmatic and sensible, not just for investment, which will be small, but because Russia could be a mediator that one day helps even such

renegades as North Korea to open up.

Meanwhile, Russia's insistence on a UN solution to the Iraq conflict, rather than an American-led invasion, has pragmatic roots too. Permanent membership of the UN Security Council offers one of the few levers of world power that an impoverished Russia still has; it would not like to see the Council ignored.

When necessary, the pragmatism also works the other way. For years Belarus's president, Alexander Lukashenka, has wheedled aid and concessions out of Russia while demanding a union of the two countries as a thinly-disguised way for him to become president of all the Russias. But the increasingly dictatorial Mr Lukashenka has no friends in the West. Even his own officials detest him, say foreign diplomats in Minsk. And recently Mr Putin has grown visibly tired of him too.

Last month he responded to Mr Lukashenka's integration proposals by making one of his own: in essence, let the Russian Federation absorb Belarus's seven regions, making the Belarussian president redundant. Earlier this month the Russian and Belarussian press published a transcript of a tapped phone conversation, in which a Russian MP, Boris Nemtsov, told a Belarussian opposition leader, Anatol Lyabedzka, that the Kremlin was sympathetic to moves to undermine Mr Lukashenka. Evidently, Mr Putin does not hold on to traditional allies just for the sake of it.

The situation in Georgia is more worrying. Mr Putin timed his bombing threat to coincide both with the anniversary of the terror attacks in America and with President Bush's robust speech to the UN. Russia had often raised the topic of its campaign against Chechen rebels during UN discussions on Iraq. It certainly wanted the world to see the parallel. And American officials concede that their own country's experience of terror has certainly made them more sympathetic to Russia's.

But that does not necessarily mean Russia wanted a deal: a free hand in Georgia in return for giving America a free hand over Iraq. While Mr Bush would probably like to attack Iraq, it is not clear that Mr Putin really wants a full-scale assault on northern Georgia. For one thing, it would be messy. “I don't think the Russian military is capable of clean surgical operations in Pankisi,” says Dmitri Trenin, a defence expert at the Carnegie Endowment for International Peace in Moscow. The posturing may just be Mr Putin's concession to the hawks who think he should be tougher both on Georgia—whose president, Edward Shevardnadze, has enemies in Moscow—and on America.

It may also reflect Mr Putin's own desperation. His harshness against the Chechens first made him popular with voters. But his failure to end the conflict could be a big weakness in the next presidential election, in 2004. He may not, in the end, be pushed to extreme measures, though his latest tactics look thuggish. But rather than simply condemning them, the Americans might be able to help both Russia and Georgia co-operate to find a solution.

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Macedonia's general election

A hopeful outcome

Sep 19th 2002 | SKOPJE
From The Economist print edition

Might a new coalition government run fragile Macedonia better?

Get article background

EPA

Can Crvenkovski make a fist of it?

FOR the western countries which have struggled to hold Macedonia together—by dousing the embers of war between its Slav-Macedonian majority and its aggrieved ethnic-Albanian minority—it was the best election result anybody could have expected.

In comes, as the new prime minister, Branko Crvenkovski, a professed social democrat (ie, ex-communist). Out goes Ljubco Georgievski and his VMRO-DPMNE party, a nationalist movement with roots in the Balkan wars of a century ago. On balance, that was a vote by Macedonia's Slavs for moderation.

But Mr Crvenkovski will have to share power in coalition with a new lot of Albanians. For the party that won most Albanian votes is the equivalent of Northern Ireland's Sinn Fein: in other words, a party dominated by a well-armed guerrilla movement that has been persuaded to renounce violence in return for political acceptance. So the Albanians' Democratic Union for Integration, led by a former guerrilla leader, Ali Ahmeti, is almost sure to share power with the old political bosses of the Slav-Macedonian community who ran the show when Macedonia was part of the Yugoslav federation before its disintegration in the early 1990s.

Western diplomats monitoring Macedonia's politics in the capital, Skopje, are cautiously hopeful. The European Union and NATO, clubs which Macedonia hopes one day to join, were fulsome in praise of the country's politicians and voters.

Sweetness and light, then? Not yet. Both sets of victors remain intensely suspicious of each other. Only a year ago Albanian rebels had Skopje in range of their mortars. Many Orthodox Slavs, in Macedonia and elsewhere in the Balkans, see them as unreformed terrorists and criminals. Indeed, Macedonia's state prosecutor still has an arrest warrant out for Mr Ahmeti for alleged war crimes committed during last year's fighting. Though the nationalists of VMRO have been ousted at the ballot box, the influence of their supporters in Macedonia's still pervasive criminal underworld remains powerful.

So Mr Crvenkovski needs to start keeping his promises to fight corruption and create jobs pretty fast. Mr Ahmeti, too, will need to rein in his former rebel commanders, still active in the world of smuggling and crime in the region straddling Macedonia and NATO-run Kosovo. Above all, Macedonia's politicians must learn to walk unaided. For Western European countries are getting tired of having to provide so much cash, firepower and high-level attention to the Balkans.

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Slovakia's general election

A crucial choice

Sep 19th 2002 | BRATISLAVA
From The Economist print edition

A choice between the strongman past and the European future

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THE general election on September 20th-21st offers Slovaks an epoch-shaping choice. Reject their former strongman, Vladimir Meciar, and they can expect to be invited into NATO later this year and the European Union as early as 2004. After its recent history of shaky democracy and rampant corruption, Slovakia's entry into these western clubs may give new hope to hapless countries further east. Reinstating Mr Meciar, whom the EU has long regarded as beyond the pale, would push Slovakia itself into the hapless zone.

Slovaks rejected Mr Meciar once before, in 1998, when they elected a reform-minded but fractious coalition led by Mikulas Dzurinda. In many ways, this has been a success. Negotiations with the EU have gone well. Though still riddled with corruption, the economy has at least been rescued from Mr Meciar's kleptocracy. Inflation is down and growth is expected to top 4% this year and next.

Still, few Slovaks outside Bratislava, the capital, have felt the improvement. Unemployment is running at 40% in the east, where criminal gangs smuggle migrants and drugs across the Ukrainian border and on into the EU. Health and education remain woeful. In hospitals, patients must bring everything, including lavatory paper. In schools, teachers often demand bribes to mark exams. The government has failed to overhaul the rotten judiciary. Some judges solicit bribes. Not one member of Mr Meciar's government has been brought to justice.

At least Mr Dzurinda has managed to marginalise Mr Meciar, who has done his bit to help. Much-aired television footage of him lunging at a Slovak journalist—fists clenched, face convulsed in momentary fury—inspired editorials suggesting he seek not political office but psychiatric help. His once-solid party has splintered, helping cut his share of support in the opinion polls from 30% to 18%.

Still, his party may yet win more votes than any other. But Mr Meciar is probably too much of a pariah to attract any coalition partners. More likely is another centre-right government team, including Mr Dzurinda's party, an ethnic-Hungarian one, the Christian Democrats, and the populist party, ANO, of Pavol Rusko, who owns Slovakia's biggest television station.

Much will depend on Robert Fico, an ex-communist—a younger, slicker and emotionally more stable version of Mr Meciar. He offers an anti-establishment, populist brand of law-and-order rhetoric. His SMER (Direction) party will probably be the only left-leaning one to cross the threshold of 5% of the popular vote needed to gain seats in parliament. If he scores well, he could have enough leverage to become the next prime minister.

That would bring the shady financial backers of his campaign into focus. What they want in return for their money is fuzzy. Many used to back Mr Meciar. Some have energy interests: not for nothing is Mr Fico a backer of nuclear power and eager to reopen energy deals struck by Mr Dzurinda's government. Slovakia, then, would remain out of Mr Meciar's clutches, and thus acceptable to western clubs. But in any event it has a fair way to go before becoming a civilised democracy.

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Austria's Jörg Haider

A populist bids adieu, for now

Sep 19th 2002 | VIENNA
From The Economist print edition

The apparent retirement of Jörg Haider could reshape Austria's politics

EPA

Is his Kampf really over?

HE HAS resigned or threatened to resign many times in his political career, only to return in triumph to answer the desperate pleas of his Freedom Party to stay on. But when the 52-year-old demagogue shocked his comrades last weekend by saying he would not seek to regain his party chairmanship, few of the party faithful begged him to change his mind. Indeed, some of his former supporters told him to stop meddling in national politics for good. At least for the time being, it seems that Jörg Haider will no longer play a big part in Austrian politics. That is a remarkable turnaround for a man who, only two-and-a-half years ago, was being pilloried by politicians across the whole of Europe as a threat to western democracy, after his populist Freedom Party had joined the country's ruling coalition.

Earlier this month, Mr Haider had at least had the satisfaction of bringing down that same government after he had virtually forced Susanne Riess-Passer, his party's nominal leader as well as being the country's vice-chancellor, to resign, along with several other Freedom Party people in the government, for being too co-operative with the coalition's senior partner. Wolfgang Schüssel, the outgoing chancellor, who hails from the mainstream conservative People's Party, then called a general election, now due on November 24th.

The Freedom Party's main hope for keeping up its vote at the polls was for Mr Haider to step back into the national fray as party leader and to play on his favourite, well-tested vote-catching themes of xenophobia and hostility to the European Union, especially its policy of embracing new countries to Austria's east.

But this time he had fallen out with too many of his colleagues to let him come smoothly back as party boss. Among other things, they disliked the way he had humiliated the popular Mrs Riess-Passer, who had done much to make the party more respectable. Mr Haider also said he had been threatened by an unnamed “emissary of the military lobby” because of his opposition to the Austrian government's proposed purchase of 18 Eurofighter jets. A man, he said, had walked up to him outside a restaurant and told him, “Don't interfere with the purchase of the jets and keep an eye on your family”. Many people found that hard to believe.

In any event, his party is in disarray. Its moderates pleaded in vain with Mrs Riess-Passer to come back as party leader. Instead, Mathias Reichhold, the transport minister in the outgoing government, was chosen as the party's new chairman. An Alpine farmer, he had sided with Mrs Riess-Passer in her struggle with Mr Haider, but his easy-going manner made him just acceptable to the party's radicals, who are now clearly on the defensive.

With Mr Haider out of the picture, Mr Schüssel has a better chance of hanging on as chancellor. If he fails to do so, he will probably bow out of national politics altogether. Many in his People's Party blamed him for teaming up with Mr Haider's lot in the first place, but, with Mr Reichhold in charge, the prospect of the same right-wing coalition might be palatable to a wider range of Austrians. In any event, the Social Democrats under Alfred Gusenbauer say they are confident of making a comeback, perhaps again with Mr Schüssel's lot as their junior partner in coalition. A poll this week put these two main parties neck and neck, with the Social Democrats on 37% to the People's Party's 35%—and the Freedomites down to

12%.

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Sweden's victorious centre-left

On top, as usual

Sep 19th 2002 | STOCKHOLM
From The Economist print edition

Sweden's winning left is happy to be Western Europe's odd party in

Reuters

Still the most important Persson

THE Social Democrats, who have run Sweden for 61 of the past 70 years, won their third general election in a row on September 15th and show little sign of losing their grip. Indeed, for the first time since 1968 the government actually increased its share of the vote, achieving nearly 40% against more than 36% four years ago. The incumbent prime minister, Goran Persson, who took charge in 1996, looks set to run the show for quite a while yet.

The Swedish result is all the more striking because centre-left governments are out of fashion in Western Europe. In the past 12 months, voters in France, Portugal, the Netherlands, Norway and Denmark have turfed them out. “We've broken the trend, “ says Mr Persson, urging his German counterparts to follow suit in their election on September 22nd.

Swedish lessons for Europe? Mr Persson is not a reformer in the mould of, say, Britain's Tony Blair. His Social Democrats have made little effort to distance themselves from the country's still-powerful trade unions. He is broadly against private involvement in public services such as health care. And he has few qualms about raising taxes. Moreover, he fought his election campaign in time-honoured style, repeatedly stressing that it was better to keep up spending on the health service, schools and looking after the old than to cut taxes, even though Sweden's are the highest in the rich world.

For the main opposition party, the conservative Moderates, who promised big tax cuts, the election was a catastrophe. Their vote slumped from 23% last time, in 1998, to a bare 15%. The knives are out for their dreary leader, Bo Lundgren, who failed to convince voters that he could slash taxes yet preserve social benefits.

Many non-socialist voters turned instead to the more welfare-friendly Liberals, who tripled their vote to more than 13%. They had put themselves in the spotlight by suggesting that immigrants seeking citizenship should pass a Swedish-language test. Their leader, Lars Leijonborg, said his party was not anti-immigrant and that racists were “doubly thick in the head” if they voted for it. But Mr Persson accused him, in the absence of any national rivals for the immigrant-bashing vote, of fishing in the “murky waters” of anti-immigrant sentiment. In the south of the country, parties more openly hostile to foreigners made gains in local elections.

Messrs Blair and Persson are not easy ideological bedfellows but over the next year they will be sharing an agenda as they both try to persuade their compatriots to agree to adopt Europe's single currency, the euro. On that score, Mr Persson's crushing victory should strengthen his chances of doing so, though for a long time he was himself lukewarm towards the idea and must still convince the many sceptics on his party's left of the benefits of ditching the krona.

A referendum could be held as early as the spring, although most expect it next autumn. Opinion polls suggest that most Swedes now want to join. But support for the project has been fickle. Mr Persson has plotted a careful path but obstacles could yet trip him up. Swedes could once again become more hostile to the idea if, for instance, the EU backs a war against Iraq (most Swedes are against), or if the right gains the upper hand in other EU countries, or if more evidence pops up suggesting that EU institutions are corrupt and mismanaged. All such possibilities make many Swedes feel queasy about deeper

European integration.

Sweden is keen on enlarging the EU to the east and on pressing for more openness in Union affairs. But, especially if Sweden did decide to join the euro after all, Mr Persson would be reluctant to accept a further reduction in the powers of EU countries that is now under discussion at the constitutional convention in Brussels. The question of Sweden joining NATO may come up in debate in the next few years, as it has done in neighbouring Finland and in the Baltic states. But so far Swedes have shown little enthusiasm for giving up their country's longstanding yen for neutrality.

To ensure a stable majority in parliament Mr Persson will still have to rely on the small Green and ex-communist Left parties, which previously backed the government without actually being part of it. Before the election, both had demanded a seat in government as a condition for their continued support. Mr Persson has refused, mainly due to differences over defence and the EU: the smalls are keener on neutrality and suspicious of further integration into Europe. Instead he has offered them “deeper co-operation”. Expect him to cut some sort of deal with them before parliament comes back on October 1st. Whatever the outcome, as the Left's leader, Gudrun Schyman, jovially puts it: “The red team won”.

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Italy's economy

Is Silvio Berlusconi a liberal?

Sep 19th 2002 | ROME
From The Economist print edition

Not if his record in government so far is anything to go by

PROMISES, promises. Freeing the economy was Silvio Berlusconi's top priority when his right-wing coalition took office in June last year. If he managed to achieve that aim, many Italians were prepared to overlook his own controversial business past. Mr Berlusconi, a tycoon turned politician, promised to speed up privatisation, overhaul the creaking state pensions system, loosen Italy's rigid labour market, cut taxes, make the government step back and let market forces work their magic. That was the hope.

It has yet to be fulfilled. At the end of August, for example, his government froze the prices of an array of public services—hardly a liberal move. It blocked a rise of less than 2% in the electricity tariff due to take effect on September 1st. No wonder the Refounded Communists, as the unreconstructed bit of Italy's once-Moscow-guided party is known, gave a cheer.

Mr Berlusconi's government is also poised to interfere with energy. It has legislation in hand to annul the independence of Italy's energy regulator, though that would flout the European Union's policy of creating a free market in energy. In banking too, the government has shown an itch to meddle. Earlier this year, on behalf of local councils, it presented a bill that would give it control over a swathe of private charitable foundations with stakes in some big banks.

The irony is that Mr Berlusconi seems to be stemming a tide towards privatisation that preceding left-of-centre governments had encouraged. From 1992 until the beginning of 2001, Italy was one of the keenest countries in the EU to sell off state assets. In that time such sales raised around *euro*113 billion ($110 billion). Since March last year, Mr Berlusconi has raised just *euro*235m.

One reason is that both central and local governments still have their fingers in many businesses—and they find it hard to let go of the patronage. The Treasury still owns almost one-third of ENI, a huge energy group, over two-thirds of Enel, a vast electricity company, and 4% of Telecom Italia. Some of Mr Berlusconi's people say it would be foolish to sell now, with the stockmarkets so low. But the political will is plainly lacking as well.

The same timidity makes the government balk at changing Italy's over-generous state pensions scheme. At the end of June, Antonio Fazio, who governs the Bank of Italy, warned that public pensions are becoming unsustainable. They now gobble up nearly 15% of Italy's GDP and 40% of the public sector's current spending. But with the trade unions firmly against labour-market reform, while demanding wage increases to match Italy's inflation rate of 2.4%, the government has simply shied away from tackling pensions.

Despite Mr Berlusconi's reluctance to confront the trade unions, Italy still faces an autumn of labour discontent as contracts are renewed. But he has also managed to upset the employers, who had counted him as one of their own. Previous governments had slightly reduced the tax burden. Mr Berlusconi has so far failed to do so. The chairman of Confindustria, the employers' club, wrote to him this week demanding an urgent meeting to discuss such matters.

To give Mr Berlusconi his due, his room for manoeuvre is tight. Public-sector finances are shaky. The budget deficit will be close to 2% this year and the ratio of public-sector debt to GDP looks set to rise to almost 111%, despite the EU's stability pact, which insists that the figure should go down. Italy's credibility at the European Central Bank in Frankfurt is falling.

The reasons for Italy's poor economic performance under Mr Berlusconi are various. Like other countries, Italy has been hit by the global downturn. For another thing, the second-biggest part of his coalition, the

post-fascist National Alliance, likes government control. And other supporters of the government, such as those who emerged from the ranks of the now defunct Christian Democrats, still believe in paternalistic intervention. But another reason may be that Mr Berlusconi has been preoccupied with other issues, particularly his own problems in court.

It was a telling sign of his priorities that one of his personal lawyers, who also chairs the judicial-affairs committee in the lower house of parliament, threatened parliament's dissolution this week. There would have to be a general election, he said, if a bill is not urgently approved that would have the effect of kiboshing the trials in Milan where Mr Berlusconi and a fellow MP in his Forza Italia party are accused of bribing judges. Until the prime minister frees himself from the rigours of the law, do not expect him to set about freeing the economy.

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Charlemagne

What common foreign policy?

Sep 19th 2002
From The Economist print edition

When the going gets rough, Europe's bigger nation-states still go their own way

CRISES have a nasty way of exposing pretensions. On paper at least, the countries of the European Union agreed back in 1993 to share a common foreign policy. For good measure, they decided in 1999, by then 15-strong, to share aspects of defence as well. Many EU countries want to go even further. At a convention on Europe's future now being held in Brussels, the German government, for example, says that a single European diplomatic service should replace national ones: *au revoir* to the Quai d'Orsay; farewell to King Charles Street. Many conventioneers want the EU's future foreign policy decided by majority votes among EU governments. Valéry Giscard d'Estaing, the convention's president, wants the Union to have its own foreign minister—and he is viewed in Brussels as fairly cautious, as architects of Europe go. Even Britain's Tony Blair has said that he wants Europe to be a “superpower” (though “not a superstate”).

Meanwhile, back on planet earth, an international crisis is in full swing. Europe's three biggest powers—Britain, France and Germany—have distinctly different approaches. Not only do they disagree. For domestic reasons all three countries' leaders positively revel in stressing the distinctiveness of their views.

Tony Blair emphasises Britain's “special relationship” with the United States at every opportunity, carving out a niche as America's most reliable friend and military ally. He knows there are heavy misgivings about war in Britain but equally that any prime minister who allows relations with the United States to be ruptured must pay a high political price. Gerhard Schröder, in the midst of a bitter campaign for re-election as chancellor, has flatly ruled out any military involvement in an attack on Iraq, even one authorised by the UN. In Brussels his men may be urging the EU to run a common foreign policy, but back on the election trail he has suddenly discovered the virtues of a “German way”. This has let Jacques Chirac, the French president, present himself at home as the voice of middle-ground good sense. French diplomats tut-tut about Germany's refusal to face up to its global responsibilities, but Mr Chirac has also taken a dig at Mr Blair, casting France as a “true friend” of America, which means it is willing to talk frankly to it, in contrast to “sycophants” (no names mentioned, of course) who blindly agree to everything it proposes.

Where, in all this, are the Union's officials who are meant to be weaving together the threads of a common foreign and security policy? Javier Solana and Chris Patten, the two voices of any putative joint foreign policy, are in a close-to-impossible position when the major EU powers disagree. Both men flew to New York to attend the UN's General Assembly but over Iraq they are sounding pretty piano. In a big international crisis, Europe's focus has once again switched back to national capitals.

It is not that the EU is incapable of forming foreign policies. It has recently done rather well in the Balkans. Over second-order issues—the International Criminal Court and the Kyoto treaty on global warming—it has developed and promoted policies that differ distinctly from American ones. The gap between European multilateralism and American unilateralism has indeed become a cliché. Even when it comes to Iraq, there are elements of a common European approach—in particular, a strong preference for dealing with the problem through the United Nations. So why do the Europeans look such a shambles?

The reasons are both political and institutional. Paradoxically, given the EU's insistence on taking action through the United Nations, the structures of the UN invite Britain and France to behave first and foremost as nation-states. As a result of the settlement of 1945, they hold two of the five permanent seats in the UN's Security Council. In institutional terms, the European Union simply does not exist at the UN. Advocates of a single European foreign policy have always wanted to replace the French and British

seats with a single EU perch on the Security Council. After all, they say, the Union speaks with one voice at the World Trade Organisation: there, as a result, it can look Uncle Sam in the eye. So why not adopt the same formula at the UN? Fine in theory. But persuading the British and French to surrender their inherited rights in such a forum is nigh-impossible. In any case, attitudes to the use of military force and to the United States still vary widely across the EU. In normal times those differences can be papered over. In a crisis, when countries have to make hard choices, differences are more likely to be exposed.

The European way

Yet despite all this, a European position over Iraq may ultimately emerge by default. Cultural and historical differences have pushed European leaders into taking different positions in the first stages of the crisis. Saddam Hussein's offer to let the UN's weapons inspectors back in may accentuate those differences in the short term. But in the long run almost all EU countries may endorse even an American-led war on Iraq, however vague a UN mandate, and many may chip in with military or logistical help. It is widely expected in Europe that Mr Schröder, if he wins his election, will soften his opposition to America's policy.

That is because, deep down, most Europeans still harbour a deep fear of the consequences of losing the American security guarantee that saw Western Europe through the cold war. As one of Europe's top policy-makers puts it: “It's appalling that America has put us in this position over Iraq, but in the end we'll have to go along with them because the consequences of a breach with the United States would be even worse.”

Over the coming months the Union's leaders may therefore begin to speak the same language again. A belated triumph for a burgeoning new Common Foreign and Security policy? Hardly. More a tactical climb-down in the face of a determined superpower—and conducted at different paces according to the demands of domestic politics.

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The countryside

Charge of the green welly brigade

Sep 19th 2002
From The Economist print edition

Crisis in the countryside? Hardly

RAP music and homosexuality are not the best-known pastimes of Britain's countryside campaigners. But in the run-up to the “Liberty and Livelihood” countryside march in London planned for September 22nd, anything to dispel the stereotype that the movement consists of brutal toffs is welcome. At a rally outside Parliament on Tuesday, hunting horns tootled and well-bred voices raised cheers to welcome an impromptu recital by Samuel Payne (nicknamed “the President”), a black American singer who has become a prominent supporter of the protest. “Our secret weapon—soooo hard for Labour to explain away,” said one campaign official.

As a green jeep circled Parliament Square, towing an ingeniously constructed electric bonfire, an excitable elderly woman in galoshes spoke enthusiastically of her gay and lesbian allies. Their group, Hunting Pink, is a pun on the name for the foxhunters' traditional scarlet coats, which could become little more than fancy dress if the government bans the sport, as it proposes to. “The gays like hunting because they can dress up—the same reason that they become priests,” she explained, in an ambitious lunge towards tolerance.

The proposed ban on hunting is only one of a number of grievances the marchers are bringing to town. There is, they say, a “crisis in the countryside”. The rural economy is suffering from a depression in agriculture, plus the aftermath of the government's disastrous handling of the foot-and-mouth outbreak last year which cost other businesses billions of pounds, and the pedantic enforcement of burdensome new regulations. Farm incomes have halved since the mid-1990s. Weekenders and outsiders moving to the country drive up house prices so that locals can no longer afford to live where they grew up. Villages become dead middle-class ghettos for commuters and oldies, and the government does nothing to stop this happening.

But the countryside doesn't get quite as rough a deal as the campaigners make out. For a start, farmers still receive £3 billion ($4.6 billion) in direct subsidy, plus another £250m to help them diversify and restructure. There are programmes for the rural economy as a whole, too. One such aims to find the 25% of rural areas with the worst productivity and raise them to the national average, through a mixture of grants, loans and training. Given the difficulties involved in defining productivity, let alone raising it, that seems a tall order. Luckily this is costing the taxpayers a mere £40m a year.

Although the state spends about 20% more per head on public services for town-dwellers, that is largely because people in towns are poorer and sicker than those in the countryside, and more of them are foreign (which puts up the cost of educating them). Public services tend to be better outside big cities.

Patients wait longer to see a doctor in London and the (largely urban) West Midlands than they do anywhere else in the country. Waiting times are shortest in Wales. According to league tables on the performance of police forces in England and Wales published this week by Policy Exchange, a think-tank, the West Midlands and London came 37th and 40th out of 42: Dyfed and Gwent (Wales again) were first and second. Urban schools tend to be worse, too. That's why so many parents of young children move out of the cities. Not many move in the other direction.

Basic public services aside, there are plenty of subsidies, hidden and overt, that prop up life in the countryside. The state spends nearly £100m a year on rural bus services—many of which carry very few passengers. The rural post-office network loses £25m a year. Another £30m goes to beefing up rural policing.

Reports of the death of the rural economy have been somewhat exaggerated. Farmers have certainly had a bad time in recent years. Over the six-year comparison favoured by the farm lobby, the decline in incomes does look dramatic. But this is hardly fair. Sterling was exceptionally weak in 1996-97, and prices for farm goods very high. Now the pound is strong and prices low—but in a cyclical industry, that is only to be expected.

Furthermore, although farmers' incomes have been dropping, the value of their assets has risen by around 40% since 1992. Sean Rickard, a former chief economist at the National Farmers' Union, now at the Cranfield School of Management, notes: “the average farmer sits on net worth of £700,000. Most of them could afford to retire more comfortably than most people in this country. What they are really asking is that we subsidise a way of life that they can pass on to their sons.”

“The average farmer sits on net worth of £700,000”

Outside farming, much of the countryside is thriving, especially in businesses that have managed to stay clear of the government. Henry Lang, a Somerset farmer, realised in the mid-1990s that he would make more money farming buildings. His converted barns are now home to seven small outfits, in fields ranging from software to tapestry, with nearly 40 workers compared with just one on his 1,300 acres. Michael Brown, owner of the largest business, a smokery, says the countryside is a “brilliant” place to do business.

Population flows are a good indicator of where people think life is better. Each year, 100,000 Britons move to the countryside. Without the recent influx of foreigners, London would still be shrinking, as it was for decades, and as most other British cities still are.

Oddly, the popularity of rural life is one of the protesters' main gripes: that outsiders drive up the cost of housing for locals. Richard Burge, who heads the Countryside Alliance, the lobby group organising this weekend's march, believes that “if you can earn a living in the countryside, you have the right to buy a house that you can bloody well afford.”

Short of restoring feudalism, or covering the countryside with cheap new homes (which the protesters, naturally, oppose) that seems fanciful. It is sad but true that, the poorer you are, the fewer choices you have about where to live—in cities or in the countryside.

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Scotland's hunts

Riding for a fall

Sep 19th 2002 | EDINBURGH
From The Economist print edition

Foxhunting is already banned in Scotland. Not that you'd know it

Get article background

ENGLAND'S foxhunters predict numberless disasters in the countryside if hunting with hounds is prohibited. Hunts will be disbanded. Thousands of fox-hounds will be slaughtered. Hundreds of hunt workers will be out of a job. So why has none of this happened in Scotland, which banned traditional foxhunting in March this year?

Scotland's prohibitionists wanted to ban all hunting with dogs. But the green-welly brigade persuaded them that, if foxes were to be controlled, dogs still had to flush them out, and a gun could finish them off. As a result, hunting is illegal only if done purely with dogs and horses. Use a gun, and you can claim the loophole left for pest-control. The Duke of Buccleuch Hunt, the oldest of the ten traditional Scottish fox hunts, has been out several times since the ban and expects to kill 60-80 foxes this year, much the same as before the ban was implemented. The local police force seems quite content that the new law is being observed.

Hunt followers on horseback seem to enjoy the new routine pretty much as they did before. There is every prospect that English and Welsh hunt followers will be able to do the same under the law planned by the government in Westminster. Alun Michael, a junior rural affairs minister, says the government wants to strike a balance between “recognising utility” (the need to control foxes as a pest), and ending unnecessary cruelty.

The huntsmen maintain their stiff-upper-lip determination to carry on partly because they still hope that the ban on hunting can be overturned in the courts. Although the first legal challenge was thrown out by a judge, the hunters plan to pursue their case relentlessly, all the way to the European Court of Human Rights if necessary. English courts can expect similar sport.

It is not clear that the fox has benefited from the subtle change of practice in Scotland. Being chased, exhausted and ripped to pieces by a pack of fox-hounds clearly “compromises the fox's welfare” (to use an official commission's wonderful phrase). But being chased, exhausted and shot does not sound a whole lot better.

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Smuggling

Anything to declare?

Sep 19th 2002
From The Economist print edition

Customs officers' powers are excessive, but so is smuggling

RICHARD EVANS, a retired lorry driver, and his family were travelling in Spain last summer when their camper van broke down. They left it to be brought back by the AA. But customs officers at Dover claimed it was being used for smuggling. They seized the vehicle and all its contents, including 9,000 cigarettes and 20 bottles of spirits. The van, worth £20,000 ($30,800), is still impounded. It even took Mr Evans six months to recover his 90-year-old mother-in-law's wheelchair.

Under European Union regulations, people may import an unlimited quantity of alcohol and tobacco, so long as it is for their own personal use. Had Mr Evans been driving his van himself, he would probably have had no trouble.

Cases like this are putting Customs and Excise's considerable powers under scrutiny. A recent stinging High Court judgment about another vehicle seizure said, “the mindset of those determining these policies has not embraced the world of an internal market where excise goods can move freely across internal frontiers.” And, on September 18th, the EU announced that it was giving Britain two months to prove that customs officers were not breaching consumers' rights to shop freely in Europe. “Cross-border shopping...is a fundamental right under EU law and should not be regarded as a form of tax evasion,” said Frits Bolkestein, the internal market commissioner.

Customs officers have an impossible job. Excise duty and VAT on a pack of premium brand cigarettes account for 79% of the recommended retail selling price of £4.51. An identical pack costs £1.97 in Belgium. One in every five cigarettes smoked in Britain—some 17 billion altogether—has been smuggled. The Tobacco Manufacturers' Association reckons that 80% of hand-rolling tobacco is smuggled.

One in every five cigarettes smoked in Britain has been smuggled

The main weapon Customs and Excise has in tackling abuse is to seize cars in which it suspects goods are being smuggled. Guidelines suggest “personal use” can mean only up to 800 cigarettes, for example. Anyone bringing in more can be asked to explain. In the past three years, customs officers have impounded more than 22,000 vehicles. Tellingly, only a fifth of seizures are contested, and fewer than 1% of appeals are successful. Officials say the value of cross-channel smuggling has fallen sharply in the past year, from £1.6 billion to £400m.

Some customs officers, though, have clearly been over-zealous. And the recent High Court case ruled that the legislation under which Customs and Excise operates wrongly reverses the burden of proof. The defendant must prove that he is not bringing in tobacco and so forth for a commercial purpose. It also said that customs officers must have “reasonable grounds” for searches: suspicion and instinct are not enough. The government is appealing.

The minister in charge of Customs and Excise, John Healey, accepts that there is an urgent need to respond to questions about the “legitimacy” of the Customs regime. But he says the charge that Customs are abusing their powers is wrong: “Customs,” he says, “never stop at random, they never do blanket searches. They always have some ground for stopping people.” Tell that to Mr Evans.

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Gays

Come on out

Sep 19th 2002
From The Economist print edition

They are bothering both Anglicans and Tories

HOMOSEXUALITY hardly seems the most pressing issue facing either the toothless Conservative Party or the declining Church of England. But both institutions—ancient, prominent and troubled—are now embroiled in an argument about their attitude to a subject that most outsiders find bewilderingly peripheral.

For the Tories, it is a question of what to do about Section 28, a strongly worded piece of legislation passed in 1988 by the last Conservative government, which forbids the promotion of homosexuality in schools. Prompted by the fear that trendy local authorities were using sex-education lessons to pervert children's minds, it is unpopular with teachers, who say it makes it hard to answer pupils' questions about homosexuality.

A government attempt to repeal the clause failed this summer in the House of Lords. Another try is planned, which modernising Tories want their party to support. This would fit nicely with the party leader Iain Duncan Smith's plan of portraying a new sympathetic image, replacing a narrow appeal to family values with explicit tolerance towards both homosexuals and heterosexual sex outside marriage.

Traditionalist Tories are horrified by the party's shift. David Davis, a leading front-bencher demoted by Mr Duncan Smith in a clumsy reshuffle this summer, wants the party to stick up for Section 28. That may be popular with many of the party's existing supporters, but may make it harder to gain new ones.

The shambles is mirrored in the Church of England, where the new archbishop of Canterbury, Rowan Williams, takes a soft line on homosexuality that also infuriates traditionalists. This week the outgoing archbishop, George Carey, warned of a split in the church if Mr Williams continues to support reforms that would, for example, allow the ordination of openly gay men to the priesthood, or the blessing in church of homosexual marriages.

In reality, there are already plenty of excellent homosexual priests who make little effort to disguise their domestic arrangements. The real difficulty for the church is that homosexuality, like all sex outside marriage, is explicitly condemned in the Bible. For many believers, abandoning that position for something more pragmatic seems a painful retreat into uncertainty.

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More BBC

Quantity and quality

Sep 19th 2002
From The Economist print edition

One BBC channel produces just what a public-service broadcaster should

Get article background

THE government was busy approving the BBC's expansion plans again this week, this time to launch another digital television channel, BBC3. Along with BBC4, a highbrow channel, and two new children's channels, CBeebies and CBBC, the BBC now considers its matching suite of digital channels complete. But BBC3 and BBC4 in fact illustrate sharply differing pictures of the broadcaster's future.

A year ago, the government rejected the proposed BBC3, designed for 25-34-year-olds, because it was “not distinctive enough” from the commercial sector, where young people are the demographic holy grail for advertisers and broadcasters. Channels Four and Five favour them and plenty of pay-TV channels cater for them: Sky One, E4, Kerrang, Kiss TV, Paramount Comedy, Smash Hits, Bravo, Trouble, MTV, MTV Base, MTV Dance, the list goes on. BBC3, such channels claimed, would steal their audiences, and so depress their ad revenues.

A revamped bid has changed the government's mind, though. It accepted advice from the Independent Television Commission that the loss in advertising to the commercial sector, at £7m ($10.8m)—or just 0.2% of all TV advertising revenues—will be “manageable”. It also imposed 12 conditions on BBC3: 80% of output must be specially commissioned, for example, and 90% made in Europe. The minister for broadcasting, Tessa Jowell, says BBC3 must concentrate on bringing new material to the screen “not on competing for well-established programmes” (in other words the American imports aired by the commercial channels). So cult American series such as “24”, which, after a first weekly airing on BBC2, was repeated each week this year on BBC3's prototype, BBC Choice, would be frowned on in future.

Contrast the BBC's ambitions for BBC3, however, with its performance at BBC4, launched in February this year. This channel, whose tagline is “a place to think”, was always designed as something “that the commercial market would never do”, says Roly Keating, its controller and formerly head of arts at the BBC. Its first week's schedule indeed verged on a parody of non-commercial TV, with township opera from South Africa and a performance by a Senegalese singer in an Islington church hall. A top-rated show will typically draw some 50,000 viewers—almost negligible in television terms.

Yet that narrow appeal makes BBC4 a model of what a publicly financed broadcaster ought to do. It has roamed into territory where its ratings-driven sister channel, BBC1, seldom dares to tread. Despite a tiny £35m budget, it boasts an intelligent prime-time talk show and a world news programme so internationally minded that its London provenance is barely visible. The channel attracts such varied participants as Tom Stoppard, Arundhati Roy, Jeffrey Sachs and Naomi Klein.

BBC4 may wear its gravity a little too heavily at times, but it supplies a variety and thoughtfulness unavailable on prime time BBC1. The more the BBC flagship channels chase the ratings, and the more that BBC4 refuses to be dictated to by them, the more the channel looks like a model for what a slimmed-down version of BBC television could look like.

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Exam results

Cheating

Sep 19th 2002
From The Economist print edition

Another year, another A-levels scandal

Get article background

LAST year it was grade inflation: some said that too many As were being awarded, meaning either that the exams were too easy or the marking was too generous. This year it's the opposite: sixth formers who were predicted stellar A-level results have found themselves with a fistful of Us instead of the As they expected.

The A-level system changed between 2001 and 2002, and exams seem to have got even easier. It appears that in order to maintain a semblance of consistency between this year's results and last year's, the exam boards deliberately lowered the marks of top students. Some strong candidates who were predicted an A in a particular subject were in the end told they deserved only a U (ie, they flunked the subject). It is too early to say how many youngsters were affected—possibly thousands, from both independent and state schools.

The smoking gun in this pistol-packing farce is a letter from Ron McLone, the chief executive of OCR, one of three implicated exam boards, to John Bridges, the head of English at Wrekin College in Shropshire. Mr Bridges had written to Mr McLone in August to query his students' alarmingly bad results. Mr McLone's reply is a quagmire of jargon and verbiage, but a couple of sentences stand out. He speaks of “striking an appropriate balance” to ensure that this year's results looked more or less like last year's. To achieve that, he goes on to say, certain “standards finally established had to be more demanding than those originally recommended by many of our awarding committees”. Translation: he intervened to override the views of his own chief examiners and moderators.

And what's this “appropriate balance” stuff? Tell that to Ann-Marie Ellis, one of Mr Bridges' pupils at Wrekin, who, after getting top marks in all three of her AS levels and two of her subsequent A-levels, was awarded a U for her synoptic paper (the one which tested her overall mastery of the subject), bringing her final grade down to a B. At least she was not alone. Fourteen of Mr Bridges' 15 pupils in English, despite predicted results ranging from As to Ds, were awarded Us. “When you see results like this, you know that something is amiss,” observes Mr Bridges, with admirable restraint.

An inquiry is being conducted by the Qualifications and Curriculum Authority, the government's exam watchdog. It is due to report to Estelle Morris, the education secretary, on September 20th. The QCA states “categorically” that there has been “no instruction...to depress grades artificially and disadvantage students”. That is not what Edward Gould, master of Marlborough College in Wiltshire and chairman of the Headmasters' and Headmistresses' Conference, believes. “We understand,” he says, “that direct pressure was brought to bear on the chief executives of the three examining bodies in England.” Mr Gould wants all disputed results to be reviewed, and for a full, and fully independent, investigation to get to the bottom of the matter. If a direct line of connection can be established between the Department for Education and Skills, the QCA, the exam boards and a deliberate lowering of A-level results, then heads must surely roll.

Either way, the current fiasco will drag the already besmirched name of A-levels still deeper into the mud. It may also be a great fillip for alternative systems of assessment, such as the International Baccalaureate, a compromise between the specialisation required in some national systems and the breadth preferred by others. Some 22 schools currently offer the Baccalaureate, including Sevenoaks in Kent, the best performing co-educational school in the country. Many of Britain's brightest pupils from the class of 2002, confused and disappointed by their A-level results, may wish that option had been available to them, too.

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Insurance and murder

Moral hazard in Liverpool

Sep 19th 2002
From The Economist print edition

Getting their numbers wrong is nothing new for insurers

INSURERS find human carelessness easier to gauge than outright wickedness. That is as true today as it was in late 19th-century Liverpool, where a bunch of housewives systematically murdered their relatives for the insurance money. The skulduggery has come to light in a new study of two murderesses, Margaret Higgins and her sister Catherine Flanagan, who were hanged in March 1884.

Working-class households in north Liverpool used to pay insurance premiums of a shilling-or-so a month (a few pounds in today's money) to meet burial costs and the needs of those freshly widowed or orphaned. There was little control over who exactly insured whom. Salesmen who peddled the policies door-to-door on commission didn't care. Insurers—big names such as the British Workmen's Insurance Company, the Royal Liver Friendly Society and Prudential Assurance—relied on a clause that paid only half the sum insured if death occurred within a year.

Higgins and Flanagan were convicted of poisoning relatives, including Higgins's second husband Thomas and Flanagan's son John, with arsenic. But the police at the time counted more murders. Nine possible suspects, all women, seem to have been involved in deceiving insurance salesmen, paying premiums into a syndicate and abetting the murders. Arsenic was easy to obtain in those days—simply sold over-the-counter until 1851, and readily available afterwards from sticky flypapers, which were impregnated with the stuff.

The deaths often followed indecently soon after buying the insurance, but initially aroused no suspicion. The syndicate collected hefty sums by the standards of the times—£71 8s on the death of John Flanagan, £79 on the death of an unfortunate lodger, and £21 18s 6d on the death of Thomas's daughter Mary. It would have hauled in another £108 4s on the death of Thomas Higgins if the fraud had not been discovered.

Other deaths and other suspects, mentioned in a statement by Catherine Flanagan, were ignored. The prosecution preferred to send her to the gallows than to use her as a further witness. But a study* of this statement and other police evidence, made recently at Liverpool University, throws light on the women's macabre “self-help network”. The Home Office, in its report on the crimes, regretted the activities of these burial societies and the perverse incentives they provided, but decided little could be done.

* “The Black Widows of Liverpool”, by Angela Brabin, *History Today*, October.

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Bagehot

Saddam's feint

Sep 19th 2002
From The Economist print edition

Iraq's volte-face has made life tougher for Tony Blair

THE suggestion made by Iain Duncan Smith, over tea last week with Tony Blair on the terrace overlooking the garden of 10 Downing Street, that they might join forces during Tuesday's Commons debate on Iraq to see off the appeasers and the fainthearts was met with a smile and the politest of "thanks, but no thanks". Mr Blair, as he demonstrated in an impressive speech to the trade union movement, has never been reluctant to confront his own party when he has deemed it necessary. And, besides, he was then confident that the tide of argument would be running strongly for him by the time that Parliament was recalled.

And so it seemed until the Iraqis' sudden, but largely predictable, volte-face over weapons inspection. President George Bush, prompted and encouraged by Mr Blair, had dramatically engaged with the United Nations; there seemed every prospect of a sufficiently tough new resolution from the Security Council to sanction, at least implicitly, the use of force against Iraq; and even Egypt and Saudi Arabia, stridently opposed to war only a week or so earlier, seemed intent on joining the fast-rolling anti-Saddam bandwagon. With opinion polls showing a pronounced shift in support for British military involvement in the toppling of Saddam Hussein, and with the imminent publication of the long-awaited "dossier" on Iraq's weapons of mass destruction, Mr Blair could regard the one-day debate, which he had only reluctantly conceded, with some equanimity.

It all looks different now. Having appeared to be in control of events, Mr Bush and Mr Blair are, at least temporarily, on the back foot. But the problems created by Iraq's declared willingness to accept the return of inspectors "without condition" are much greater for the prime minister than they are for his chum in the White House. Despite the almost universal belief that no proposal coming from Baghdad should be treated with anything other than the greatest possible scepticism, as Mr Blair prepares for both Tuesday's debate and, the following week, the Labour Party conference, he must realise that the terms of political trade have changed.

It's not that Mr Blair need fear anything so definitive as a vote in Parliament on his policy. Although dissident Labour MPs may find a way of registering their opposition through a procedural motion, unlike Mr Bush, the British prime minister is not constitutionally required to gain the support of the legislature before committing his armed forces to action. Historically, declarations of war are taken under something called the Royal Prerogative. Theoretically, these are decisions taken by the sovereign (although, in fact, they are the prime minister's) which are therefore, amazingly, not subject to the scrutiny of Parliament. Constitutional reformer though he may be, Mr Blair seems quite comfortable with this notion.

The difficulty for Mr Blair is that the party he leads has a degree of faith in the UN that comes close to matching its sentimental passion for the National Health Service. Having made the case so strongly for building support for action against Iraq among "the international community" and placed such importance on getting the quasi-legal blessing of an appropriate Security Council resolution, Mr Blair has little choice other than to remain committed to that process. All will probably be well if a resolution of the kind that Britain and America are demanding (one that gives coercive powers to the inspectors, lays down a tight timetable and carries the unambiguous threat of armed intervention the moment the Iraqis start playing their old games) can be bullied past the foot-dragging Russians and French.

The party Mr Blair leads has a degree of faith in the UN that comes close to matching its sentimental passion for the National Health Service

But whatever sort of resolution is passed, there is almost certainly a majority of Labour MPs and, possibly, cabinet ministers as well, who will expect the weapons inspectors to be given a

reasonable amount of time to do their work before even contemplating what should come next. Most of the Labour Party thinks that there is now a real opportunity to avert war and will demand that it is not spurned—a view Mr Blair will find hard to ignore even if he shares Mr Bush's belief that the chances of the inspectors succeeding in their task are minimal.

So much easier for Bush

Even on the Tory side of the House, for all Mr Duncan Smith's uncomplicated support, a surprisingly large number of MPs have considerable misgivings about war with Iraq. In their case, it is not so much naive devotion to the UN that motivates them, but atavistic anti-Americanism (Suez is not forgotten), long-standing sympathy for conservative Arabs and distaste combined with envy for what they see as Mr Blair's grandstanding with the American president. There is also genuine dismay that their leader's complaisance has resulted in many legitimate questions—what sort of post-Saddam Iraq is envisaged, for instance—going unasked.

By contrast, Mr Bush has far greater room for domestic political manoeuvre. Although the chances are that he will conclude, however tetchily, that even in the absence of a satisfactory resolution, the inspectors should be seen to have failed before a military campaign begins, he is not bound by even that constraint if, as seems certain, Congress gives him a fairly free rein. If a divided Security Council becomes an obstacle to action, he will bypass it. At that moment, he will expect the British, if nobody else, to be with him. Mr Blair's worry is that, at that moment, most of his party won't be.

Even if things become as messy as this, Mr Blair is unlikely to deviate from the path that he has chosen. He will take his party on if he has to. Such is Mr Blair's dominance of British politics that he is likely to prevail. His job is probably safe as long as the Americans do not lead him into disaster. But, uncomfortably, the prime minister's destiny is increasingly in Mr Bush's hands rather than his own.

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OPINION

Comeback kid?

Sep 19th 2002
From The Economist print edition

As the locus of innovation moves on to other fields, can information technology ever regain its pre-eminence?

THE encouraging news, amid all the gloom from the information technology (IT) front, is that innovation continues to thrive. A glance at where, and for what, patents are nowadays being granted suggests that the locus of innovation has begun to move from telecoms, computing and e-commerce towards fresher pastures—especially in genomics and nanotechnology. As this issue of *TQ* was going to press, *The Economist* was praising a group of high-tech innovators for their contributions to the economy at a ceremony in San Francisco. For the judges, the greatest reward was the sheer difficulty of narrowing down the large number of candidates proposed by readers and panellists to a handful of winners (see article).

As a pointer to the future, the category receiving the biggest number of nominations was bioscience. Interestingly, more than a few of these could just as easily have been classified under nanotech. Clearly, an intriguing convergence of technologies is under way—as the medical, pharmaceutical and agricultural sectors adopt chip-based techniques.

Meanwhile, contrary to reports of its death, the IT sector proved itself still capable of innovating vigorously—though, understandably, nowhere near as much as during the feeding frenzy prompted by telecoms deregulation, panic over the millennium bug, and the dotcom mania of the late 1990s. The excessive exuberance during the run-up to the millennium has saddled the IT industry worldwide with $750 billion of debt and some $250 billion of overcapacity. That is an awfully big hangover for it to overcome.

What, then, are the chances of information technology in general—and Silicon Valley in particular—staging a spectacular recovery? Or has the locus of innovation moved on permanently, creating new centres of technological excellence—such as the strip between San Diego and Los Angeles, where many new genomic ventures are setting up shop?

There are crucial lessons in the way the telecoms industry was deregulated that need to be absorbed before IT can enjoy any serious resurgence. By allowing newcomers to provide high-speed connections over the “last mile” between the incumbent telephone company's local exchange and the subscriber, deregulation was supposed to usher in all manner of broadband services for the home. Couch potatoes were promised hundreds of video-on-demand channels of entertainment. Online shoppers were going to enjoy better ways of buying things than trudging to the shops. Information addicts would have the pleasure of surfing the web at warp speed.

Six years on, the picture is very different. In terms of the availability of cheap broadband, many consumers are worse off today than they were several years ago. Who is to blame? Certainly, the deregulators failed to ensure a level playing-field. And the telephone companies dragged their feet every bit as much as might have been expected when it came to making space available in their local exchanges for newcomers' equipment. Even so, most of the blame for the collapse of broadband competition must be pinned on the newcomers themselves.

Wrong technology

Few of these “competitive local exchange carriers” (CLECs) and their backers did their homework properly. The DSL (digital subscriber line) technology that most of them adopted was singularly inappropriate for the task. Apart from causing interference problems, the “2B1Q” algorithm used to send

broadband digital signals down a pair of copper telephone wires cannot punch its way through the “bridge taps” where local lines are spliced. Making matters worse, few of the CLECs appreciated that shipping data—even though it accounts for more than half of telephone traffic—is a loss-leader. The only things that make money in the telecoms business are voice-based services. The handful of CLECs that understood all this have prospered. The rest have gone out of business, leaving mountains of debt and excess capacity that will take years to mop up.

There are far better ways than 2B1Q for delivering broadband over the last mile. A technology known as TC-PAM has none of the other's problems and three times its data throughput. Recent variants of this technology do the job better still. Readers with experience of such solutions are encouraged to air their views on our online forum. With your help, the next issue of *TQ* will try to chart the course of the telecoms recovery.

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MONITOR

Clean coal's uphill haul

Sep 19th 2002
From The Economist print edition

Corbis

A flurry of activity is reviving clean coal technology. After two decades of unfulfilled promises, will coal come clean this time?

CAN coal ever become a friend of the environment? Coal-fired power stations supply half the electricity used in America (and a similar amount in many other industrial countries) but are responsible for 80% of the power industry's emissions of carbon dioxide—the most worrisome of the so-called “greenhouse gases”. Because of special exemptions, much of the country's coal-derived electricity comes from plants that are more than 30 years old. Many of those plants are approaching the end of their commercial lives, and the thought of having to replace a lot of dirty old power stations with new ones that will have to comply with the Clean Air Act is causing a nightmare in the power industry. Suddenly, energy engineers are talking about “clean coal” technology being on the brink of commercialisation.

That message has been heard before. There was similar excitement over clean coal in the mid-1980s and early 1990s. Large sums of taxpayers' money were handed out to firms developing clean coal. However, the Clean Coal Technology Programme, launched by America's Department of Energy in 1986, has since been criticised by the government's own watchdog body for waste and mismanagement.

The difference this time, say proponents, is that a number of electricity suppliers have started building commercial-scale facilities that use clean coal. Meanwhile, a handful of companies—including KFx of Denver, Global Energy of Houston, and Air Products and Chemicals of Allentown, Pennsylvania—have pursued ventures to tap the growing interest in clean-coal technology.

Much of the renewed interest stems from the Bush administration's new energy policy, which sees clean coal as one answer to America's energy problem. The new policy has earmarked $2 billion for invigorating the Clean Coal Technology Programme. Despite its troubles the programme has, over the past 18 years, prompted some 38 clean-coal development efforts. In August 2002, it expanded on those efforts for the first time in eight years, making $330m of matching funds available for clean-coal projects aimed at curbing emissions of sulphur dioxide, nitrogen oxides and other pollutants, as well as investigating methods for blending coal with other fuels, and for converting it into gas. More tellingly still, a growing number of clean-coal projects are being financed entirely by power companies themselves.

But clean coal means different things to different people. The Clean Coal Technology Programme spans everything from tweaks in power plants to gasification of the coal itself. Simply boosting the efficiency of coal plants—and thus reducing carbon-dioxide emissions—is seen by some as an example of clean-coal

technology. Ultimately, however, clean-coal technologies fall into three categories: pre-combustion processing of coal; combustion processes that burn coal more cleanly; and post-combustion processes that scrub the exhausts.

The most widely used clean-coal technologies are post-combustion scrubbers that cleanse exhausts of sulphur dioxide and nitrogen oxides. Scrubbers, which were first introduced in the 1970s, have become cheaper and more effective. A good modern system can remove up to 95% of sulphur from exhausts for a third of the cost of earlier technologies.

Coal treatment and refining processes are getting a lot of attention as well. In the 1970s, the Stanford Research Institute developed a process for transforming western coal—which is high in moisture as well as sulphur—into cleaner-burning feedstock. Belatedly, a Denver-based start-up called KFx is commercialising this process. The company claims that several utilities are now testing its refined coal, called K-Fuel. The company's patented process takes western coal and “ages” it at high temperature and pressure to change its chemical composition. The result is a feedstock with up to 60% more heat output per kilogram, far lower mercury, sulphur and ash content, and the potential for far cleaner burning.

Other refining efforts are also being commercialised. Air Products and Chemicals, for example, has plans to bring its process for synthesising methanol from coal-derived gas to market. The biggest stir of all, however, is coming from a new form of generation called “integrated gasification combined cycle” (IGCC). This converts coal into a gas which is then cleansed and burned in a combustion turbine. The advantage of IGCC is that it allows generating companies to capture carbon dioxide from the exhaust more easily, while producing electricity more efficiently than is possible with other clean-coal methods. Best of all, the process can be retrofitted on to existing power plants.

The process involves feeding coal into a gasifier that is injected with steam, oxygen and flux (a compound that creates spots for the chemical reactions to occur). This changes the chemical structure of the coal, producing hydrogen and carbon monoxide in the process. The raw gas is then purified of sulphur compounds, and the tars and heavy oils left over from the restructuring are recycled back into the gasifier for combustion. The clean gas is then used as fuel in a gas turbine to produce power. The attraction is that the turbine's exhaust contains carbon dioxide that is highly concentrated, which makes it easier to capture and convert into something less damaging to the environment.

Even with current designs, Global Energy reckons that IGCC plants will operate at about 40% efficiency, compared with 33% for conventional generation. Future plants are expected to achieve efficiencies of 44% or more. Best of all, the emissions will be well below the Clean Air Act's requirements—with 99% of the sulphur being removed, and emissions of nitrogen oxides, carbon monoxide and particulates (tiny pieces of soot) being far lower than is possible using scrubbers.

So far, two IGCC plants have entered service in America, with support from the Department of Energy. One is Tampa Electric's 250 megawatt plant in Florida, which cost $300m. The other is Psi Energy's 260 megawatt Wabash River Generating Station at Terre Haute in Indiana, a 1950s power plant that was retrofitted with a gasification process at a cost of $430m. IGCC plants in the Netherlands and Spain are also helping to prove the technology.

Others are on the way. A subsidiary of Global Energy is building a second plant, with the help of the Department of Energy, in Trapp, Kentucky. It is now moving ahead with plans for a 580 megawatt plant in Lima, Ohio, which will be built at a cost of $500m without government assistance. Recently, says Stuart Dalton of the Electrical Power Research Institute (EPRI) in San Francisco, a number of other power companies have enlisted the institute's help on multimillion dollar studies for IGCC plants.

However, two swallows do not constitute spring, cautions Mr Dalton. Indeed, EPRI expects the adoption of IGCC to be modest so long as natural-gas prices remain low. For all their environmental attraction, IGCC and other clean-coal technologies cannot compete economically with natural-gas-fired plants under current pricing and regulatory conditions. Mr Dalton reckons that IGCC only becomes economically competitive when natural gas costs $4 per million BTUs. Slightly more bullishly, Global Energy reckons that break-even comes at $3.50 per million BTUs. The average price of gas today is $2.50 per million BTUs.

But the cost of using dirty fuel is set to rise. California has passed a law restricting emissions of greenhouse gases, and a Senate committee in Washington, DC, has proposed legislation that would tax carbon-dioxide emissions. It is now only a matter of time—probably a few years at most—before power companies in America and elsewhere are faced with the prospect of paying a tax on (or buying tax

credits for) the amount of carbon they dump into the atmosphere. Then, say clean-coal enthusiasts, just watch processes such as IGCC take off.

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MONITOR

Cutting the ties that bind

Sep 19th 2002
From The Economist print edition

Better than Bluetooth or WiFi, a robust new wireless scheme promises to deliver multimedia around the office and home without cables or fuss

Chipset for network video

PERSISTENT protests from America's Department of Defence, Federal Aviation Administration, satellite-radio companies, and firms hawking GPS (global positioning system) equipment have managed to curb the development of ultra-wideband (UWB) wireless technology for more than three years. They all leaned on the Federal Communications Commission (FCC), saying that UWB—which is, among other things, a nifty way of dispensing with the cables connecting home-entertainment gadgets to one another—would interfere with their navigational-guidance systems, radar and satellite transmissions. The big mobile-phone companies even warned the FCC that ultra-wideband transmissions would block telephone calls.

Caught in the middle, a couple of start-up firms trying to build chipsets for sending and receiving rivers of data using ultra-wideband have responded to each of the new technical hurdles in the hope of being given approval to sell their equipment to the public. Their patience paid off earlier this year, when the FCC at last approved the unlicensed use of the UWB spectrum (3.1 to 10.6 gigahertz).

One of the first to celebrate was Martin Rofheart, co-founder of XtremeSpectrum of Vienna, Virginia. Dr Rofheart has been busy showing off his UWB chipset's performance to consumer-electronics manufacturers from Japan and elsewhere, beaming flawless video and audio between various devices at speeds approaching 100 megabits per second. For applications where more than mere battery power is available, UWB can transmit data at speeds up to 500 megabits per second.

XtremeSpectrum has designed a chipset the size of a business card that electronics firms can incorporate into their own products. The development has proceeded in fits and starts. At one point, the FCC wanted to prevent ultra-wideband from being used in handheld devices. Because of their peripatetic nature, regulators feared that mobile gadgets would interfere with sensitive communications at airports or military installations. But handheld devices such as MP3 players are essential to ultra-wideband's consumer appeal. The technology will allow users to swap thousands of music tracks in seconds instead of minutes or even hours. A compromise was worked out, limiting the frequencies inside which XtremeSpectrum's chipset can operate.

The history of ultra-wideband differs from other wireless schemes, such as Bluetooth and the increasingly popular 802.11 protocol. Bluetooth is a low-power option for transmitting data over short distances at less than one megabit per second, while the 802.11 family offers maximum speeds of either 11 megabits per second or 54 megabits per second. But all three members of the 802.11 family consume too much power and are too expensive for battery-powered devices. In addition, neither Bluetooth nor the 802.11 family are ideal for handling the vast amounts of data exchanged between digital home-entertainment devices or battery-powered MP3 audio players.

However, both are being promoted by industry groups, and have been making inroads as alternatives to traditional hardwired forms of data transmission. Bluetooth's role is as a replacement for wires connecting computers to their peripherals and mobile phones to laptops. And 802.11b, a variant of the standard that has been given the more user-friendly name WiFi, is becoming popular for wireless

computer networks in homes, offices and public spaces.

By contrast, ultra-wideband came out of the defence industry. Its origins go back to the 1950s, when military radar technicians were trying to improve existing equipment. Two decades later, their research led to something called “ultra-wideband synthetic aperture radar”. Spy planes and satellites use this kind of radar to see through dense ground cover to locate enemy troops and camouflaged equipment on the ground. It works by showering the target with rapid pulses of broad, low-frequency signals that punch their way through solid objects.

XtremeSpectrum has begun shipping its Trinity chipset to select customers. Dr Rofheart expects leading lconsumer-electronics firms to begin embedding the chipset into DVD players, VCRs, video-game consoles and home-theatre equipment in time for Christmas 2003. Industry watchers predict that the burgeoning home-networking market will reach $4 billion by 2006. That should leave plenty of room for XtremeSpectrum and its only competitor, Time Domain, which will unveil its own ultra-wideband chipset, called PulsON, later this year.

With their effective broadcasting range limited to only ten metres or so, ultra-wideband chipsets would appear to do what Bluetooth does and more. Apart from linking gadgets together wirelessly, the turf that Bluetooth had staked out for itself includes setting up spontaneous “personal area networks” that allow, say, a smart card in a person's pocket to buy a subway ticket automatically on the way past the barrier. However, with hundreds of times the bandwidth, ultra-wideband has a hefty advantage.

But there could still be room for both. Without the raw speed for swapping video and audio files, Bluetooth would be restricted to the home as a handy wireless-form of “wiring” for low-data-rate connections between computers and their peripherals. Meanwhile, UWB would do the heavy lifting when video and audio needed to move wirelessly around the building.

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MONITOR

Microchips in the blood

Sep 19th 2002
From The Economist print edition

Many of the promised genomic drugs will be impossible to swallow as pills. Instead, they will have to be injected in minute quantities at precise intervals for months at a time. Just the job for an implantable syringe-on-a-chip

SUPPOSE the Human Genome Project turned up lots of superb new medicines—but few of them could be used. Far-fetched? Not by any means. Most of the new drugs likely to come out of research on the human genome will be proteins and other relatively large biological molecules. Such macromolecules tend to be unstable and cannot be delivered orally, because they are easily digested by enzymes in the gut.That is why diabetics have to inject insulin directly into the bloodstream rather than swallow it.

Add an ageing population along with the need for multiple-drug regimens (such as those for Alzheimer's or Parkinson's), and drug delivery becomes a critical issue for the pharmaceutical industry, rather than a mere afterthought. What is needed is a reliable means of delivering multiple drugs in precisely timed and measured doses—without the inconvenience and hazard of injection.

One promising answer lies in an unlikely union of microchips and medicine. The first result of this shotgun marriage is a prototype that exploits methods used for etching silicon computer chips to fabricate small devices that can be implanted in the body, where they can deliver minute doses of drugs from hundreds of tiny wells in carefully measured quantities. In early animal tests using placebos, this idea—developed at the Massachusetts Institute of Technology—has shown encouraging results.

Now officials at MicroCHIPS, a start-up company in Cambridge, Massachusetts, say they plan to begin tests using actual drug samples in animals this autumn. If the results are positive, pre-clinical trials in people could begin within two years. And if all goes well there, too, the device could be commercially available by 2006. The pay-off for the company could be substantial. The drug-delivery market in America alone is expected to exceed $22 billion in 2003.

Researchers in this field refer to their goal as intelligent drug delivery. In the case of the MicroCHIPS device, the intelligence is derived from a piece of silicon one centimetre square. Etched in the silicon is a matrix of tiny wells, each designed to hold 150 nanolitres (billionths of a litre) of medicine. The first clinical device will have about 400 wells per chip. Using the same methods of etching and deposition that create the wires and transistors on a computer's microprocessor, the company positions a thin layer of gold on top of each well. An electric current passed through the gold cap at the right moment will cause it to dissolve, liberating the well's contents.

A small onboard processor, packaged with the drug-holding chip, choreographs how each of the 400 wells opens at precisely the right moment over a period of, say, six months. In the case of the MicroCHIPS prototype, the processor is an off-the-shelf model similar to those that power handheld calculators. The whole drug-delivery system finishes up as an implantable device no bigger than a cardiac pacemaker. After being implanted, blood vessels grow around the chip, allowing the medication to diffuse straight into the capillary network.

Timed release of an array of drugs is only the beginning of what intelligent drug delivery promises in the years ahead, says John Santini, president of MicroCHIPS. Others agree that the ability to release drugs within the body in precise amounts at precise intervals will eventually be combined with the ability to measure drug levels (and the body's physiological responses to them) and then to broadcast the information to data-logging equipment outside the patient. When those three functions—drug release, response sensing and data transmission—are combined in an implantable device, physicians will, in effect, have an “intelligent agent” that can work amid the body's own tissues to do their bidding. The start, indeed, of a real-life “Fantastic Voyage”.

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MONITOR

Hanging bytes, pregnant bits

Sep 19th 2002
From The Economist print edition

Electronic voting has been getting a lot of attention since the Florida recount debacle. But doing away with a paper-based record may not be such a good idea

WHEN citizens of Palm Beach County in Florida participated in a recent mock election, they were delighted. It was not the patriotic choices (the "Most Famous American" and many other things American) that made them smile, but the new voting-machine—installed to avoid a replay of the recount debacle after the presidential election in 2000. Instead of laboriously punching out chads, voters simply touched a screen.

Early and often

Voting-method in US elections, %

	1980	1992	2000
Paper ballots	40.4	21.2	12.5
Lever machines	36.4	25.4	14.7
Punch-card*	19.1	23.5	19.2
Mark-sense*†	0.8	20.1	40.2
Kiosk (DRE)*	0.2	3.7	8.9
Other‡	3.0	6.1	4.4

*Electronic tabulation †Optical scanning ‡Fax, telephone, Internet

Source: Caltech/MIT Voting Technology Project

This new-found voter satisfaction may not survive the real election day on November 5th. Replacing error-prone punch-card voting-machines with touch-screen kiosks, at least in their current form, seems in some ways like jumping from the frying pan to the fire. Most importantly, these direct-recording electronic (DRE) systems raise questions about whether elections should be digitised at all.

At first sight, doing away with paper and letting computers register votes seems an attractive proposition. At least in theory, touch screens should be less confusing than the infamous "butterfly ballots". Computers are unlikely to produce anything like the "hanging" or "pregnant" chads that plagued Florida's 2000 presidential election. Electronic votes can be easily counted and recounted. At the mock election in Palm Beach, for instance, it took no more than an hour to tally all the votes.

Ironically, it is computer scientists, not officials, who are counselling caution. There is no way to verify that ballots are recorded, transmitted and tabulated properly, argues Rebecca Mercuri, a computer-science professor at Bryn Mawr College near Philadelphia, and the most outspoken critic of DRE. For one thing, vendors have yet to discover the virtues of independent peer review. Worse, it is theoretically impossible to determine whether computer systems are free from programming bugs or nefarious code.

This is why, Dr Mercuri thinks, elections should not be paperless. She would like to see touch-screen systems connected direct to a printer to produce physical evidence of a voter's choice. Such a printout could be inspected by the voter and kept as back-up in case there were problems with the electronic voting system. Without such an external audit trail, votes would be lost forever if a DRE system were to crash.

Although he is best known as the inventor of anonymous digital cash, David Chaum is also convinced that paper, or something like it, still has a role to play in voting. But instead of creating a physical back-up copy of a ballot, the voting system developed by the cryptographer would provide citizens with a receipt with which they could later check whether their vote had been counted.

Such receipts have generally been outlawed because they can lead to vote-selling or coercion. But Dr Chaum proposes a new kind of receipt—one that contains a voter's choice in an encrypted form. A special printer produces a two-layered translucent receipt with the votes in plain text. Once these layers are separated, each shows only a seemingly random pattern of tiny squares, yet contains the encoded vote.

So as not to allow anybody to manipulate an election by tricking the printer, the voter can decide which of the two layers will be shredded by a poll worker and which will be the receipt to take home. The voting-machine keeps an electronic copy of this receipt and later sends it in for counting and posting on the official election website. If voters cannot find their receipt there, it is evidence that there is

something wrong with the election.

If this sounds complicated, the tabulating process proposed by Dr Chaum certainly is. The process of decrypting the receipts is split up into several steps, with each step performed by specialised computers called “trustees”. By taking samples in a certain way, one can test whether these trustees have changed the votes—without compromising ballot secrecy (which is achieved by deleting the serial numbers from the receipts).

Such receipts, says Dr Chaum, will not only increase voter confidence, but also eliminate the need for trusted voting-machines, such as DRE systems, which are costly because they are based on proprietary technology. In fact, he says, even PCs in libraries and schools could do the job. The only special-purpose piece of hardware needed would be a small printer capable of printing on both sides of the two-layer receipt.

Yet despite its advantages, it is unlikely that Dr Chaum's approach will be used in an election any time soon—for the same reason that his digital cash has yet to take off. It is ahead of its time and demands too much of users. Even Dr Mercuri's simpler proposal has not made much headway. Adding a paper trail, vendors of DRE systems argue, would defeat the purpose of a touch-screen kiosk.

To overcome such resistance, says Dr Mercuri, the Voting Rights Act, which continues to be debated in Washington, should dictate that all voting-machines have a “physical audit capacity”. Yet even sophisticated systems will not improve the reliability of American elections if other problems are not fixed as well. Voter lists remain notoriously unreliable and gerrymandering is rampant. As Bruce Schneier, a noted cryptographer puts it: “There are no technological solutions to social problems.”

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MONITOR

Telling right from left

Sep 19th 2002
From The Economist print edition

Many man-made drugs, unlike natural ones, come in right-handed and left-handed versions. Separating them has been a huge problem—but not for much longer

Jekyll and Hyde molecule

WATCH a small child dressing and it is not immediately obvious which shoe goes on which foot. The problem of fitting molecules into biological systems presents a similar dilemma. In life, and especially in developing pharmaceuticals, shape matters. Using the wrong-shaped molecule to treat a disease is about as effective as using the wrong key to get into your house.

Many chemical compounds exist in two asymmetrical, mirror-image forms—like right and left hands. The molecules, called chiral enantiomers (from the ancient Greek for hand), are chemically identical in most ways. But when they take part in the complex reactions involved in living systems, they frequently have different effects. The differences in activity may be subtle. For example, one form of an odour molecule called limonene smells of lemons, the other of oranges. In other cases, one enantiomer is inert. But it sometimes happens that one form causes serious side-effects. Thalidomide, a morning-sickness drug that turned out to cause terrible damage to unborn children, is widely believed to belong to that category.

Most drugs work by locking into another molecule, often a protein on the surface of a cell, and affecting its function in some way. That is where chirality comes in. Drug molecules with the wrong handedness will not fit the shape of the space they are aimed at. Or, worse, they may fit a differently shaped space on a different target molecule, and thus cause an unintended effect.

Unlike one-handed medicinal compounds isolated from nature—quinine, for example, which is used against malaria—laboratory reactions produce an equal mixture of left- and right-handed molecules. Making pure left-handed or right-handed drugs is therefore hard. And, although the pharmacological significance of chirality was evident in the 1930s, separating the mixtures was until recently too painstaking to be practical. But the effort is worth it. In 2001, single-enantiomer drugs accounted for $147 billion of sales in America, or 36% of the total drug market, according to Technology Catalysts International (TCI), a consulting firm based in Falls Church, Virginia. Painkillers, antibiotics and antiviral drugs, such as those used to treat HIV, topped the list.

Fermentation is one obvious starting point for making chiral enantiomers, since it is a biological process and its products are therefore likely to be single-handed. But fermentation can deliver only what nature offers—mainly antibiotics. Far and away the most popular route to single-enantiomer drugs is “resolution”—a set of separation techniques that are labour-intensive, wasteful (the undesired product must be discarded or recycled) and inefficient. But they persist, says Sandra Erb, manager of chiral and fine chemicals consulting at TCI, because once a company has registered a drug with the authorities (a process that restricts the ways that the drug may be made to those that are filed with the application), it takes too much time and money to put other technologies in place.

From the late 1960s onward, William Knowles, Ryoji Noyori, Barry Sharpless and Henri Kagan, among others, began to develop catalysts that made great quantities of single enantiomers very fast. So-called “asymmetric catalysis” won the Nobel chemistry prize in 2001 for Dr Knowles, Dr Noyori and Dr Sharpless. The technology has had an enormous impact on research—and represents a trend away from classical resolution. But it is not yet an important technology in the drug industry because of its use of poisonous heavy metals as catalysts.

There are, however, other ways to get pure enantiomers. Chiral Quest at State University, Pennsylvania, focuses on a single step in the process of making a drug: forcing a chiral product into a left- or right-handed shape with the aid of “toolkits” of ligands—molecules that work with metals to catalyse a variety of reactions. That may prove to be a useful way forward. But in this field, the best answer is probably to go back to nature—or, at least, to snaffle her best ideas.

Natural enzymes, which catalyse the reactions that make life possible, generally turn out only one enantiomer. That is why chirality rules living systems. So why not simply copy them? ThermoGen of Woodridge, Illinois, does just that. The firm develops biocatalysts for use in making drugs as a complement to other chemical and separation technologies. And Synthon Chiragenics, a drug-discovery company in Monmouth Junction, New Jersey, exploits carbohydrates such as lactose and starch—abundant, freely available and notoriously chiral—as building-blocks for more complex therapeutic drugs.

Dr Sharpless goes even further. People are not very good at making medicines, he says. Life is short, while conventional drug-discovery is a long and uncertain process. So why not put nature, which is much more patient and sophisticated at doing the job, to work directly? Just as a mould can be used to make a copy of a three-dimensional object, Dr Sharpless proposes to use biological targets as templates to guide the formation of their own perfect drugs. He calls the method “click chemistry”, because of the ease with which the molecular building-blocks fit together. He and his colleagues have already used it in the laboratory to identify a molecule that blocks an enzyme related to Alzheimer's disease. Sometimes the best ideas are also the most obvious.

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MONITOR

Web of trust

Sep 19th 2002
From The Economist print edition

If you like surfing the web, it is probably because you believe people are basically good

WHEN economists try to explain why the Internet is more popular in one country than another, they usually point to factors such as the number of PCs, telephone lines or average years of schooling. But something less quantifiable may be more important: trust. This, at least, is the result of a recent study by Jonathan Leland and his colleagues at IBM, which compared 17 countries.

The Internet's anonymity and vastness encourage misrepresentation and fraud. Thus, people who are normally suspicious tend to shun the medium, while more trusting souls embrace it. To test this proposition, the team correlated OECD data on Internet adoption with results from the World Values Survey. One question the latter asks is: “Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?”

The statistical link between trust and Internet adoption turns out to be surprisingly strong. The degree of trust in a society, as measured by the percentage of respondents who answered “yes” to the first part of the question above, explains almost two-thirds of national differences in the percentage of households that have Internet access. Even when controlled for other variables, such as the number of computers, trust remains an important factor.

What to do with such results is less obvious. If governments want people to adopt the Internet, perhaps they should try to increase trust among their citizenry. Of course, there may be other reasons to think this was a good policy. But trust is cultural and historical. Besides, it is not clear what the World Values Survey question actually reveals. And even if it were possible to increase trust, the IBM researchers suggest that high-trust countries such as Norway would benefit much more from such measures than low-trust countries such as Brazil. Trying to narrow the trust divide might only widen the digital divide.

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MONITOR

Music to their ears

Sep 19th 2002
From The Economist print edition

With compact-disc sales plummeting, record companies are rethinking how to distribute copyright music online. This time, the technology for managing digital rights could actually be smart enough to do the job

AP

Song swapper shows the way

HAS the music industry finally got the message? The days of stamping out albums by the million, stacking discs in record shops, greasing the palms of disc-jockeys and then ringing up obscene profits are over. The crude but effective audio compression algorithm called MP3 changed everything. By squeezing audio tracks into a twelfth of their original digital space, a compact disc (CD) “ripped” into MP3 format could be sent over the Internet and downloaded on to someone's computer in minutes instead of hours.

Suddenly, it seemed, more CDs were being freely swapped over the Internet than were being bought. With CD sales slumping—though as much for economic reasons as because of piracy—the record companies are at long last having to learn that there are ways of protecting their copyright material without turning consumers off completely.

Previous attempts to encrypt digital music tracks to prevent endless pristine copies being distributed freely have failed because the protection methods were too easily circumvented, consumers objected to the restrictions placed on their freedom of use, and—perhaps most important of all—nobody wanted to pay for something that they could download over the Internet for nothing. Despite the industry's apparently successful effort to shut down Napster, other file-sharing networks mean that the piracy part of this equation remains as big as ever. But the latest technology for digital-rights management (DRM) is making it possible for content owners to protect music tracks and other forms of copyright material from theft, while offering flexible ways of packaging, distributing and selling entertainment online that are more likely to appeal to consumers.

Not all of the 30m consumers who use pirate services such as KaZaA and Morpheus (two of the bigger content-swapping networks to spring up since Napster's demise) want to steal music and movies. Like shareware, many download tracks on a try-before-you-buy basis. Others turn to pirate networks simply because they are easier to use. One thing has become clear: if commercial downloading services are to succeed, they must at least match the virtual jukebox features and content libraries that the illegal services provide.

On cue, RealNetworks, Microsoft, IBM and America Online have started offering far better encryption tools for their popular video and audio players, making them less of a nuisance to use. Using DRM, copyright owners still have to encrypt content such as songs and movies. And to play those encrypted files, a user still has to buy a licence that includes a code or digital key to unlock the content.

So far, no different. But the technology now allows record companies, film studios, artists and publishers to vary the rules that control how their content is used. And that, in turn, is letting record companies and other content owners experiment with more profitable ways of doing business.

For example, subscribers to some commercial online-music services are now given the option to send encrypted copies of songs to friends. In exchange for the key to unlock the content, record labels can

choose to charge or give the song away free if the friend provides, say, demographic details about himself.

Another example of DRM in use is Arista's recently launched web channel for fans of the band Boyz II Men. The channel serves up unreleased tracks, early access to concert tickets, exclusive videos, lyrics and singing lessons from members of the band for an annual subscription of $25-35. Meanwhile, film studios are using DRM to secure content for test screenings of films, allowing them to be distributed without the risk that copies might “leak”.

On top of that, Microsoft, Nokia, IBM, Intel and others are working on hardware-based encryption technology, which is more difficult to hack into than today's software. Michael Aldridge, a product manager at Microsoft, expects to see encryption chips embedded in portable devices such as DVD players with Internet access and mobile phones, as well as PCs and set-top boxes. Such tools are helping to persuade content owners to overcome some of their suspicions about the Internet as a distribution channel.

Some have been persuaded already. Pressplay, a joint venture between Sony and Universal, has expanded its catalogue to 100,000 tracks—a big improvement over earlier offerings, though still a fraction of what is available on pirate services. By applying new rules for content access based on Microsoft's DRM software, Pressplay has been able to add features that consumers demanded. Until recently, people could rent songs only for a limited period. For $9.95 a month, they can now get unlimited downloads, save tracks permanently (for an additional 99 cents a song) on a PC's hard-drive, transfer files to portable devices, and even “burn”CDs (ie, store tracks on recordable compact discs)—an idea that was once anathema to record companies.

Other content owners are being more adventurous still. Record labels such as Virgin, Arista and Sony have begun to cross-promote CDs with online fan clubs. Some of them have started to incorporate special passwords into CDs, to give fans access to artists' dedicated websites. By using DRM tools to protect the content of such sites, the record companies can do clever tricks. For instance, the passwords may include a unique identifier that can be used to capture basic information about customers. This can then be used for cross-marketing—ie, offering consumers something that others with similar tastes have also bought.

Inevitably, embracing online distribution of copyright material involves some risks. That is something that many of the media giants—which have traditionally relied on money-spinning record labels to underwrite costlier movie and television ventures—are reluctant to accept. But at least they now have a better set of software tools to protect their copyright. More to the point, they now have the chance of a whole new way of doing business. That could encourage ideas which are more adventurous—and profitable—than trying fruitlessly to stuff armfuls of music albums into the limited rack-space at record shops.

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DIALOGUE

Thanksgiving for innovation

Sep 19th 2002
From The Economist print edition

Governments worship at the altar of innovation for good reason: it now accounts for more than half of economic growth. In recognition, *The Economist* has inaugurated a series of Innovation Awards

SINCE its beginnings in the early 1840s, *The Economist* has been continually intrigued by entrepreneurs, and especially by their remarkable knack of being able to conjure up wealth, seemingly from nothing. At the same time, the paper has been constantly frustrated by the inability of economics to explain in detail how the wealth-creation process works—and why it has been so extraordinarily difficult to forecast economic growth.

The basics are simple enough. The output of an economy depends on its inputs—simplifying a bit, capital and labour. But it is not just a matter of doubling the inputs to get twice the output. There are embarrassing quirks such as scarcity and the law of diminishing returns to deal with. Therefore, over the years, the theory of growth has incorporated a rider to explain why adding more and more capital to a given workforce, or an increasing number of workers to a fixed amount of capital, results in successively smaller increases in output.

So far, so good. But how, then, do you explain why returns on investment in rich countries were considerably higher in the second half of the 20th century than during the first half? Why, for that matter, has the gap between the rich and the poor parts of the world been widening rather than narrowing? Economics teaches that, when the stock of capital is rising faster than the workforce—as has demonstrably been the case in industrial countries since the second world war—the return of each additional unit of capital should fall over time. But instead of declining, it has been rising in America, Europe and Japan. Something was clearly happening beyond mere capital accumulation and the fine-tuning of aggregate demand by tinkering with public spending, tax rates and the supply of money.

For want of a better explanation, the missing factor in the growth equation is often thought to be the addition of new knowledge gleaned from scientific discovery and technological progress—in short, innovation. In this scheme of things, innovation accounts for any growth that cannot be explained by increases in capital and labour. And though the return on investment may decline as capital is added to the economy, any deceleration in growth is more than offset by the leveraging effects of innovation. That explains why rates of return have stayed high in rich countries, and why poorer countries have not caught up.

Governments worship at the altar of innovation these days for good reason. Far from being simply some missing factor in the growth equation, innovation is now recognised as the single most important ingredient in any modern economy—accounting for more than half of economic growth in America and Britain. In short, it is innovation—more than the application of capital or labour—that makes the world go round. And, so, after almost 160 years of puzzling over such matters, *The Economist* has decided that the innovators of the world are due some special recognition.

It is not possible to recognise all the countless innovations that have helped to spread wealth, health and human happiness around the world. But with the help of suggestions from readers and a panel of independent experts, our judges (see article) have chosen a handful of people who have made the biggest contribution to the wealth-creation process in their own fields over the past few years. As we went to press, the winners were being announced at *The Economist* Innovation Summit and Awards in San Francisco on September 18th. Henceforth, the event will be an annual affair—and one that we hope will become a fixture in the calendars of innovators everywhere.

We divided the technological spectrum into five broad bands—bioscience, computing,

energy/environment, nanotechnology and telecoms—and, with difficulty, selected this year's winner for each category. But there were some serial innovators who could not be classified. So, late in the day, we added a sixth “no boundaries” category and selected a winner there, too. Here, then, are the innovations, and the individuals behind them, that we are honouring in 2002.

Bioscience

Leroy Hood for fluorescence sequencing

Leroy Hood, director of the Institute for Systems Biology, University of Washington. Dr Hood, a geneticist, immunologist and biotechnologist, was a driving force behind the successful sequencing of the human genome in the 1990s. Without the **automated DNA fluorescence sequencer** developed in his laboratory, completing the Human Genome Project could have taken the best part of a century. Dr Hood also had a hand in turning the project into a race. He was a co-author, in 1996, of a paper called “A New Strategy for Genome Sequencing”. This described a new way of assembling short DNA sequences into long ones and led ultimately to the creation of Celera Genomics, a company that produced a rival sequence to that of the “official” project. Many innovators make fortunes for themselves or their employers with ingenious new products or processes. Few have been able to help launch a whole new industry. For beneficiaries everywhere, the pay-off from Dr Hood's initial innovation is already being measured in billions of dollars.

Computing

James Gosling, vice-president and fellow of Sun Microsystems. In late 1990, with Patrick Naughton and Mike Sheridan, Mr Gosling started Sun's “Green Project”, with the aim of producing an operating system for the consumer-electronics industry. Out of this came the **Java programming language**. With the emergence of the World Wide Web, Java became popular because of the ability of any application written in the language to be delivered over the Internet irrespective of the kind of computer or operating system it was to run on. Today, Java is being built into next-generation telephones, TV set-top boxes, smart cards and countless other consumer and industrial devices. As the original designer of the language and the person who implemented its first compiler and “virtual machine”, Mr Gosling is recognised the world over as the father of the Java programming language.

Energy and environment

Rinaldo Rinolfi for common rail diesels

Rinaldo Rinolfi, executive vice-president, Fiat Research, Turin. Diesel engines have always been more fuel-efficient than petrol engines. But what prevented them from being used more widely was the noise and pollution they produced—caused mainly by the way the fuel in diesel car engines could not be burned at a steady rate. In 1990, Dr Rinolfi's team at Fiat solved the problem with a **common rail injection system**. This used a high-pressure pump to feed fuel into a manifold (or rail), allowing the injection pressure to remain steady no matter how fast or slowly the car was moving. As a result, the temperature within the cylinders remains hot enough to burn the fuel thoroughly, reducing both engine noise (ie, detonation) and noxious emissions. Fiat sold the common rail technology (called Unijet) to Bosch in 1994. Today, the most fuel-efficient cars on the market are small diesels.

Nanotechnology

Stephen Fodor, while head of research at Affymax Technologies, a pharmaceuticals company based in the Netherlands, led a team that discovered ways of using photolithographic techniques from the semiconductor industry to direct the synthesis of biochemical compounds on chips primed with light-sensitive molecules. The technology was spun out and commercialised by Affymetrix of Santa Clara, California, which Dr Fodor now runs. The company's **GeneChip** can synthesise huge numbers of small DNA molecules rapidly and cheaply on a sliver of quartz measuring no more than one centimetre square. GeneChips are used widely today for performing tests such as detecting drug-resistance mutations in

infectious organisms and monitoring human genes for cancer-associated mutations. The GeneChip has already led to the discovery of a new leukaemia.

Telecoms

Irwin Jacobs, co-founder, chairman and chief executive of Qualcomm of San Diego. Dr Jacobs took the spread-spectrum concept—a technique for sending signals using a pseudo-random sequence that was developed during the second world war—and turned it into a practical means of digital communication. Today, the technology known as **code division multiple access** (CDMA) is the fastest-growing form of digital wireless, used already by tens of millions of consumers around the world. Dr Jacobs, who taught electrical engineering at the Massachusetts Institute of Technology, and computer science at the University of California, San Diego, personally holds a number of Qualcomm's portfolio of 1,500 or so CDMA patents.

No boundaries

Shuji Nakamura, working for a tiny company called Nichia Chemical Industries on an island off western Japan, single-handedly developed the first commercial blue and violet semiconductor lasers, using gallium-nitride technology. The achievement was one of the most important leaps in the design of solid-state lasers. The wavelength of blue light is about half that of typical infra-red semiconductor lasers found in CD players and laser printers. The use of blue lasers therefore allows manufacturers to triple or even quadruple the amount of data that can be stored on a CD. Blue lasers also endow laser printers with resolutions even better than they have today. Nine consumer-electronics firms have now agreed on a standard for a recordable DVD with a six-fold increase in storage capacity based on Dr Nakamura's blue-laser technology. When Dr Nakamura left Nichia Chemical for a chair at University of California, Santa Barbara, sales of blue LEDs (light-emitting diodes) and lasers were bringing the firm more than $200m a year.

Shuji Nakamura for blue lasers

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The judges

Sep 19th 2002
From The Economist print edition

Ronald Cape, co-founder and final chief executive, Cetus Corporation (now part of Chiron Corporation), Emeryville, California.

David Farber, professor of telecommunication systems, School of Engineering and Applied Science, and professor of business and public policy, the Wharton School, University of Pennsylvania, Philadelphia.

François Grey, professor of nanotechnology, Technical University of Denmark, Copenhagen.

Vinod Khosla, general partner, Kleiner Perkins Caufield & Byers, Menlo Park, California.

Mark Levin, chairman and chief executive, Millennium Pharmaceuticals Inc, Cambridge, Massachusetts.

Amory Lovins, chief executive, Rocky Mountain Institute, Snowmass, Colorado.

Andrew Odlyzko, director, Digital Technology Centre, and professor of mathematics, University of Minnesota, Minneapolis.

Larry Page, co-founder and president of products, Google Inc, Mountain View, California.

Ian Ritchie, principal , Coppertop, Lasswade, Scotland.

Paul Romer, professor of economics, Stanford University, Palo Alto, California.

Paul Saffo (co-chairman), director, Institute for the Future, Menlo Park, California.

John Eckhouse, editorial director, Phocas Partners, Oakland, California.

Charles Pelton, general manager, Phocas Partners, Oakland, California.

Ludwig Siegele, technology correspondent, *The Economist*.

Nicholas Valéry (co-chairman), editor, *The Economist Technology Quarterly*.

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REPORTS

Goodbye to the video store

Sep 19th 2002
From The Economist print edition

Streaming video: For too long, "video-on-demand" has promised more than it could deliver. But new ways are emerging for shrink-wrapping massive video files for delivery over the Internet

IT SOUNDS like the movie addict's ultimate fantasy: a TV-mounted set-top box that taps the film libraries of Hollywood's big studios. A film buff could peruse thousands of titles spanning dozens of genres, from enduring classics to the latest blockbuster releases. After deciding what to watch, viewers would enter a password, confirm credit-card details, then sit back as 5.1-channel surround-sound video streams from a remote web server into a home-theatre system in their living room.

Too good to be true? For the moment, yes. Bespoke video-on-demand is at least three years away. But the difference now is that Movielink—a recently formed joint venture between MGM, Paramount, Sony, Universal and Warner Bros—is preparing a collective library for just such a service. The venture intends to serve up an almost unlimited selection of films over the Internet—and, eventually, through a web-connected set-top box.

There is only one problem: the current scheme for converting an average two-hour epic into a digital file results in about five gigabytes of data—equivalent to five billion letters of the alphabet (ie, close to a billion words in English). With each byte comprising eight binary digits (or "bits"), a typical movie contains no less than 40 billion bits of data. Trying to stuff that many zeros and ones through the copper lines that link most homes to the Internet—even via a broadband DSL (digital subscriber line) or cable modem connection—would take all day. If there is ever going to be a profitable online video service, content creators in Hollywood and elsewhere must figure out how to squeeze those hefty film files through narrow digital pipelines.

That is where "codecs" (compression/decompression algorithms) come in. These are sophisticated, and often proprietary, mathematical formulae that can quickly scrunch hours of digital video and determine where best to make nips and tucks unnoticeable to a viewer. The end result is a compact digital file.

One of the most prevalent codecs is MPEG-2. Established by the Moving Picture Experts Group in 1994 as a standard for digital television, MPEG-2 governs DVDs, satellite TV and digital cable content. This requires a minimum transmission rate of two megabits per second for video scenes with little movement in them and up to 80 megabits per second for action scenes, so there is little hope of sending MPEG-2 video to homes using even the fastest of Internet connections available today—which, at best, barely break the one megabit per second barrier.

More muscle needed

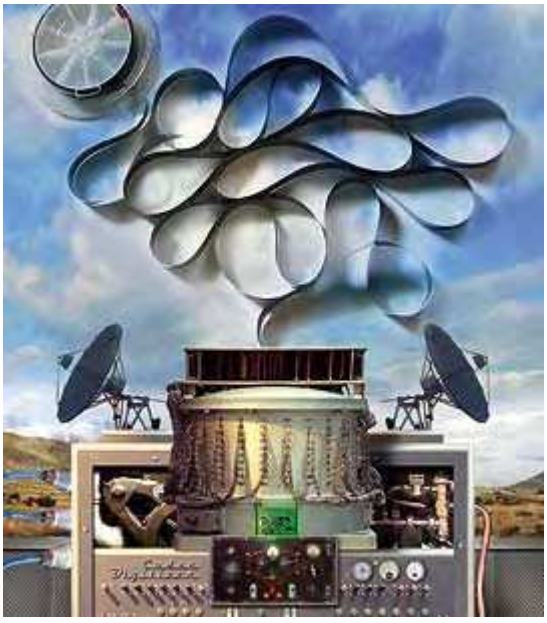
Yet, if the future is indeed “anytime anywhere” video-on-demand, as digital-media buffs suggest, then Movielink, Intertainer and other online film sites will require a codec with many times the compression muscle of MPEG-2. The demand for such a codec is spurring a feverish race between developers all angling to create the *de facto* compression/decompression standard for online video delivery.

There are the established organisations, such as RealNetworks, Microsoft and Apple, each with a video-playing software product (ie, “media player”) that exploits the firm's own proprietary codec. With 29m users, RealNetworks hopes to propagate its popular RealPlayer beyond the desktop and into set-top boxes, cell phones, PDAs (personal digital assistants), and anywhere it imagines full-motion video might be feasible. Microsoft is closing in on RealNetworks with its Windows Media Player that is now reckoned to be on some 13m personal computers. Apple's QuickTime comes third with 8m users.

“The consumer-electronics makers cannot afford to lose the battle for the set-top box.”

It is the upstarts, however, who are better positioned to rule the future of video-on-demand. For instance, the latest iteration of the Moving Picture Expert Group's standard, MPEG-4, is honed to function smoothly on consumer-electronics devices, which gives it an advantage over Microsoft, RealNetworks and Apple, whose algorithms are better suited for the beefier microprocessors inside desktop PCs. And there are a handful of others, including Pulsent, On2, and DivXNetworks, each hawking their own video codecs to content creators and electronics manufacturers, convinced that their technology is the best for the job.

Ryan Jones, who tracks media and entertainment strategies for the Yankee Group, a consultancy based in Boston, believes that Microsoft and RealNetworks will lead the way on the PC, mainly because they have reliable systems for stemming piracy. But gathering around the computer in the study to view the latest Star Wars sequel is unrealistic. “Consumers want the movie experience in their living room,” Mr Jones insists. That is exactly what those developing the newest video codecs are counting on. Mr Jones believes that the first step will be the evolution of the set-top box—the device that decodes the cable or satellite feed for displaying on TV—into a competitive consumer-electronics product.



Such a trend will turn the movie, video and TV businesses upside down. Currently, the design of set-top boxes is largely in the hands of the cable-TV operators, who want to control the kind of content accessible over their networks, such as pay-per-view (they choose the movie, you choose the time). Eventually, however, the cable providers will find themselves ceding control over the set-top box to consumer-electronics manufacturers such as Matsushita, Sony and Philips, on the one hand, and to content creators, on the other. Why? Because both the technological and market forces will simply overwhelm them. As a result, the set-top box will handle video-on-demand from any number of providers. Users will then access the content they wish to see using an Internet-like “browser” displayed on their TV screens. Eventually, film studios will rent or sell new films direct to the public.

The implications of such a trend: declining influence of the movie-distribution chains that hold sway over when and where new films are released; few video stores outside large urban areas; and dwindling attendances at cinemas everywhere. Cable providers will get their cut in the form of payment for opening their networks to third-party content.

Meanwhile, the set-top box will replace the VCR—the greatest single product the consumer-electronics industry ever produced, and one which, at its peak, generated half the industry's sales and three-quarters of its profits. That is why the consumer-electronics makers cannot afford to lose the battle for the set-top box.

One codec or many?

For codec makers, the aim will be to become the standard means for compressing all those thousands of movies that will be streamed into millions of homes. Doing so could make one company (or, in the case of MPEG-4, one consortium of patent holders) very wealthy.

Today, it is still not clear whether a single codec will emerge as the prevailing standard—just as MP3 reigns over the audio world. Nor is it yet clear whether future set-top boxes will become more like a PC, with their own microprocessors and built-in software to juggle multiple codecs. The answer could come when some media mogul—say, Jim Ramo, the boss of Movielink—chooses a single codec to compress all his company's content. That would oblige set-top-box makers to build compatible devices, rendering all other codecs instantly obsolete.

In the meantime, few are hanging around for that day to arrive. Instead, codec firms, envisaging an imminent gold rush, are spending millions promoting themselves to content providers and electronics companies. These, in turn, are hoping to avoid the blunders made by the music industry when it failed to embrace the money-spinning potential of MP3 until it was too late.

At the moment, MPEG-4 has a head start in the race to become the prevailing codec for streaming digital video. In essence, MPEG-4 is a set of technical specifications that define a patented process for compressing and decompressing video. Because nearly 90% of Internet users connect over a dial-up line, the previous version of the codec, MPEG-2, would quickly clog the pipes. MPEG-4 tackles this problem by slashing the bandwidth requirements to as little as 40 kilobits per second—some 50 times leaner than MPEG-2—while preserving clarity. At higher bit rates, MPEG-4 manages near-DVD quality.

The trick MPEG-4 uses to render crisp video without hogging bandwidth is a process known as “object-based compression”. Previous MPEG schemes simply divided each video frame into a grid, then tagged each block with a unique data signature. MPEG-4 begins with this strategy but takes compression a step further. Instead of capturing the sum total of each frame, MPEG-4 considers separate regions within the picture and decides how to handle them on the fly. For example, if the background between two consecutive frames remains unchanged, while the foreground varies, MPEG-4 will compress the static background and treat the image as a still picture. As MPEG-4 streams video over a network, static backgrounds are sent once, reserving bandwidth for dynamic parts, which have to be compressed and retransmitted as they shift positions.

Overall, MPEG-4 incorporates 23 different mathematical profiles. These enable users to adapt its algorithms to operate on a variety of devices, including pocket PCs and set-top boxes. Despite that, Mr Jones reckons that other, newer codecs could win the battle to rule the set-top box. The reason is MPEG-4's tough licensing terms. Anybody wanting to integrate MPEG-4 into a particular video streaming device must pay stiff royalties to a group of 23 companies, which together own several hundred related patents.

Between them, the consortium members have established an independent licensing body called MPEG LA to hammer out royalty agreements between MPEG-4's patent holders and the companies hoping to use the codec. Larry Horn, vice-president of licensing and business development at MPEG LA, explains that the licence is non-exclusive, giving any firm the right to negotiate a royalty deal.

The terms of those agreements, however, are still up in the air. Initially, MPEG LA introduced a scheme that would require companies employing MPEG-4 in their technology to pay a 25 cents royalty for every machine with a copy of the codec incorporated, plus a “per use” fee of two cents an hour. In other words, if a viewer watched a video encoded in MPEG-4 from CNN's website, the news network would have to pay patent holders a royalty. Although the proposed amounts were small, MPEG LA made no allowance for differing content types, free or otherwise. If, for example, tens of millions of people suddenly began downloading a two-minute video clip of the World Trade Centre collapse, the ensuing royalties would bankrupt CNN within days.

“Others are counting on MPEG LA's licensing rules to steer content creators towards other codecs.”

Following an uproar from the industry, MPEG LA reworked its royalty arrangements. In July 2002, Mr Horn announced a modified structure that places annual caps on certain types of content usage. Other features include an option for media firms and electronics manufacturers to pay a one-time licensing fee, a per-subscriber charge, or a pay-by-the-minute rate. The last would value a downloaded copy of “Black Hawk Down” at about five cents.

Too little, too late?

Many in the industry believe that MPEG LA's final licensing terms could still suffocate innovation. Apple was forced to delay the release of the latest version of its QuickTime player (version 6.0), which incorporates MPEG-4. Initially, it declared the licensing terms too onerous. Apple relented once MPEG LA revised its terms. Douglas McIntyre, head of On2 Technologies, a software company based in New York that has developed a codec called VP5, has been one of the most vocal critics. His company recently posted a tome online, criticising MPEG LA's strategy point by point. “It is a move by a few very large companies to dominate a market and fix prices,” says On2.

Mr McIntyre and others are counting on MPEG LA's draconian licensing rules to steer content creators and electronics firms towards an array of other video codecs. Anybody in the business of using video compression is bound to consider MPEG-4 as well as codecs from RealNetworks, Microsoft and Apple, admits Mr McIntyre. But he points out that other codecs work as well, if not better, and come with fewer licensing strings attached.

On2's own VP5 technology is one of several emerging codecs that provide potential users with a serious alternative. Streaming at 400 kilobits per second, about half the speed of a DSL connection, VP5-encoded video looks almost as good as images from a DVD. The company guards its compression technique jealously, but Mr McIntyre attributes most of the work to pre- and post-processing tools. These are methods for manipulating digital files before the video is compressed and after it is decoded. To that end, VP5 scrutinises data rates, making on-the-fly adjustments to image softness, colour tone, and pixel size. But with an accumulated deficit of more than $100m, On2 has been seeking new partners. It recently announced a deal to use its codec in chips for set-top boxes and mobile telephones produced by Texas Instruments.

Then there is Jordan Greenhall, a former executive of MP3.com, who amassed a wealth of experience as a broker of “content deals” for that renowned audio portal. Mr Greenhall now heads DivXNetworks of San Diego, California, which is marketing a video codec that aims to reproduce the experience of being in a cinema. DivX began as a cult movement when Jérôme Rota, a computing and digital-video guru, wrote the codec in 1999 to help him crunch graphics. Word spread, and soon DivX video appeared Napster-like on file-sharing networks around the world. So far, more than 12m copies of DivX have been downloaded, and thousands of (mostly pirated) full-length feature films, television shows, music videos, and pornographic movies are circulating the Internet encoded in this popular format.

DivXNetworks, founded recently by Mr Rota and Mr Greenhall to take advantage of the codec's grassroots success, has raised $11.6m in these difficult times for venture capital. Its latest codec, DivX 5.0, is said to be particularly good at preventing “tearing”, a playback error that occurs when the software cannot “render” the video for display at the same pace that it is being decompressed and fed into the media player. The overload appears as a frayed line across the middle of the frame. Similar to VP5, DivX 5.0 massages the decompressed video to prevent tearing, dropped frames and other glitches.

Objects beat blocks

One of the newest video-compression tools comes from Pulsent, a Silicon Valley start-up that has toiled for the past four years in self-imposed secrecy. The company claims that its “stealth team of scientists” is developing a codec that breaks the 20-year paradigm of “block-based” compression techniques. Pulsent's chief executive, Adityo Prakesh, is cagy about the specifics. But his company is not without cash, having raised $33.5m from private investors.

According to Mr Prakesh, the Pulsent codec identifies objects on the screen as unique entities. Whereas block-based compression and object-oriented codecs slice up backgrounds and foregrounds into grids, the Pulsent approach actually pinpoints real-world items in the frame—such as a person, tree or building—and processes each element separately to optimise the playback's performance. Mr Prakesh believes that his firm's codec will revolutionise video compression—so much so that he is pumping money into the development of a chip that can encode and decode files in real-time using the Pulsent algorithms. The aim is to get the chip into set-top boxes for video-on-demand services.

It is difficult to verify Pulsent's claims. Experts and rivals are curious but tentative. It is still too early to know which codecs will endure. At this stage, the strategy for most is to get their product into the marketplace and build their brand. That is not the case with Emmett Plant, a 25-year-old former Unix engineer who heads a non-profit organisation called Xiph.org Foundation that is developing open-source solutions for multimedia. Mr Plant surveys the codec scramble from above the fray. Surviving mostly on donations, Xiph.org is developing an open-source video codec called Tarkin. What really defines the

success of a codec, Mr Plant believes, is its ease of use, adaptability and popularity. He argues that the average consumer wants something that looks and sounds good, and does not care how the film is compressed.

Mr Plant compares Tarkin to Linux, the open-source operating system that has revitalised the Unix community and become a serious alternative to Windows. Linux got a foothold among computer-science students, who were looking for a cheap way to learn programming and downloaded the free operating system. Later, as companies recruited the students as software engineers, Linux infiltrated the corporate world and took over many of the more important server duties there.

“When Napster went down, Morpheus, LimeWire and Audiogalaxy quickly filled its shoes.”

Xiph.org sees Tarkin following a similar path. The idea is that as more and more programmers download the codec for use in video playback devices, they will make continual improvements to its freely accessible software. Mr Plant contends that an open-source project such as Tarkin is more likely than a commercial project to produce a high-quality codec, because the motivation behind such volunteer groups is not profit but performance.

Whether Tarkin—or any other new codec technology—succeeds will depend not only on the ingenuity of mathematicians devising the new algorithms for compressing video data and the talents of the marketing people who are seeking to build the brand. Equally important will be getting the backing of those who control the means of delivery: the cable companies. Without a conduit into the home, content providers are stymied. Most cable operators have already made big investments to add digital cable and high-speed Internet services to their networks. Providing for video-on-demand means spending millions more.

Fortunately, a short cut is in development at CableLabs, an industry R&D consortium that includes AOL Time Warner, AT&T Broadband, and Comcast. The project, known as OpenCable, will establish a cable transmission standard analogous to the Internet protocol that will allow set-top boxes from any manufacturer to work with any cable system and swap movies, games and multimedia content. The devices would incorporate an array of features, including Internet capabilities and browsing software, to make possible video-on-demand services.

Avoiding music's mistakes

But first, content creators must agree on a method to encode their content for Internet delivery. At present, nobody is sure what form that will take. Will there be one principal codec, such as VP5, MPEG-4 or DivX, handling content and powering the majority of set-top boxes? Or will there be an array of codecs scrunching video that is encoded in a variety of formats?

That is not important, according to Mr McIntyre. He cites KaZaA, a piece of software that allows enthusiasts to swap video content over the Internet in a Napster-like fashion but even more anonymously. Already, 62m users have downloaded the KaZaA software. At any given moment, some 800,000 people are said to be sharing media files this way. As high as they are, those numbers will be minuscule, declares Mr McIntyre, if Hollywood and others waste any more time quibbling over formats, or fretting over copyright infringements.

In May, KaZaA announced that it would have to shut its doors because it could not find the cash to defend itself against the barrage of lawsuits filed by the studios. Will big media ever learn? When Napster went down, Morpheus, LimeWire and Audiogalaxy quickly filled its shoes. Consumer demand for content is not going to wait for the studios to sort out their gripes. Even if KaZaA disappears, its success proves that very soon video codecs will do for movies what MP3 did for music. Then it will be too late to persuade consumers to pay for a service they can get for nothing.

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CASE STUDY

Spitting image

Sep 19th 2002
From The Economist print edition

Engineering insight, dogged determination and a dash of serendipity have made the lowly inkjet imaging device the king of computer printers

IN THE annals of computing, nothing has caused as much disappointment as putting ideas on paper. For decades, printing computer files was a thankless task for users who were seeking to reproduce precisely what they saw on the computer screen. Then along came the inkjet printer that sprayed tiny dots of ink on to the paper—and so started a revolution in the printing of high-quality images that was more important than anything since photogravure.

Thermal inkjets, first commercialised by Hewlett-Packard and Canon in the 1980s, began as slow, messy machines that were no match for the costlier laser printers that had just been introduced. But eventually, the scrappy little inkjet printers got better and better. Today, an inkjet printer costing less than $50 will spit out crisp colour pictures, sharp text and brilliant graphics as good as any laser printer costing 30-40 times more. No wonder inkjets outsell laser models twelvefold. Inkjet cartridges alone now account for $19 billion of annual sales, according to Lyra Research, a consultancy in Newtonville, Massachusetts.

For all its originality, the idea behind the inkjet is far from new. As long ago as 1867, William Thomson (later known as Lord Kelvin) was granted a patent for “Receiving or Recording Instruments for Electrical Telegraphers” which used electrostatic forces to control the release of ink drops on to paper. In 1951, Siemens produced the first continuous inkjet printer. And throughout the 1960s, other manufacturers unveiled improvements on the same idea—all with little success. Inkjets proved expensive, messy and unreliable, with pumps, bladders and other moving parts that simply could not deliver an affordable machine capable of producing high-quality prints.

The modern inkjet solved these problems with a self-contained print head, complete with inkwell, spraying mechanism and nozzles that could be controlled accurately. Throughout the 1970s, research into the technology focused onpiezoelectric methods. These use special crystals that vibrate when charged to squeeze out controlled amounts of ink. The most compelling innovation, however, came when engineers turned to heat instead of vibration.

The thermal inkjet printer was invented not once, but twice. The idea was conceived simultaneously, and unbeknown to one another, by two competing teams on either side of the Pacific. In Japan, Ichiro Endo, an engineer at Canon, noticed ink squirting from the neck of a syringe when a hot soldering iron touched it. Thousands of miles away at Hewlett-Packard's laboratories in Silicon Valley, a researcher called John Vaught dreamed up his version of the thermal inkjet by borrowing from the mechanism of the coffee percolator.

Hewlett-Packard's efforts began on Christmas eve, 1978. Together with David Donald and a group of other engineers, Mr Vaught began idly to discuss concepts for an ideal printer. The team had just delivered the engine for HP's first laser printer and was working on a gravure printer for the commercial-publishing world. Despite this, the team wanted more—especially colour, speed and, most important of all, low cost.

That was a tough combination. At the time, printers fell into two categories: impact and non-impact. Typewriters aside, the most common impact printers were dot-matrix devices, which used an array of pins to strike an ink ribbon to form characters or other images. Non-impact printers, by contrast, offered more hope. By not touching the paper when making an image, they promised to be more accurate and efficient.

Although far from mature, no fewer than five non-impact technologies were vying for success. There

were inkjets that sprayed microscopic dots of ink through hundreds of tiny nozzles on to paper; laser printers that used a laser beam and the xerography process to affix toner to paper; solid-ink printers that employed a similar technique to melt sticks of a coloured wax-like ink on to paper; dye-sublimation printers that relied on long rolls of film, heated to embed dyes into special paper; and thermal autochrome printers that applied heat to a special type of paper already impregnated with dyes to produce colour prints.

In 1978, the inkjet concept caught Mr Vaught's imagination, because it promised to yield a simple, low-cost and high-performance printer. Despite its shortcomings, the technology was considered to have far greater potential for improvement than its rivals. That afternoon, before departing for the Christmas holiday, Mr Vaught and his colleagues concluded that the ideal printer was an inkjet machine that could deliver 200 dots per inch and be capable of printing in full colour. Over the holiday, Mr Vaught set the ground rules: the new type of printer would have an array of ink nozzles spaced a two-hundredth of an inch apart and be able to feed ink fast enough to print one page per second.

Returning to the laboratory after Christmas, Mr Vaught focused on building a solid-state print head that would experience less wear and no clogging, but still be able to spit ink out fast enough for the job. As he watched a coffee percolator, he realised the answer was to use the ink itself to shoot dots on to paper.

To do so, he tried using a pair of electrodes with the ink between them acting as a resistor. The idea was to get the heat to vaporise a small portion of ink very near a nozzle, causing it to spit out a droplet. Unfortunately, the ink did not have high enough resistivity to create the necessary heat. Worse, the process electrolised some water in the ink into hydrogen and oxygen, which interfered with the operation.

“The race to develop the inkjet printer had a profound cultural impact on both companies.”

Mr Vaught then tried harnessing the hydrogen and oxygen to produce a micro-explosion capable of firing the ink out of the nozzle. A small spark could be induced across the electrodes to ignite the hydrogen bubbles and spit out a drop of ink, but the process was nowhere near fast enough. In a third attempt, Hewlett-Packard engineers opted to put all the energy into the spark itself, in order to boil a bubble of ink. That succeeded, but the electrodes quickly deteriorated.

The breakthrough came when Mr Vaught and his colleagues seized on thin-film resistors. These were found to be able to produce enough heat to boil a bubble of ink and spit a dot out rapidly with a high degree of control. The resistors were mounted inside small tubes that were etched with grooves to create the nozzles, and switched on and off rapidly to spit out microscopic dots of ink. Within three months, the Hewlett-Packard team had concocted a workable version of a thermal inkjet mechanism.

Surprisingly, for all their engineering insight, the team could not explain exactly why their printer worked. And although it worked well, and was patentable without an underlying theory, Hewlett-Packard's middle managers were reluctant to invest in the idea. Some top HP managers dismissed the invention altogether. As it turned out, the physics of Mr Vaught's process—known as “phreatic reaction”—would not be understood fully for another year.

But Mr Vaught doggedly pursued his interest in the inkjet printer. He demonstrated his work to anybody who took an interest, eventually catching the eye of, among others, Larry La Barre, an HP old-timer who was able to persuade the company's management to take the technology more seriously. Thereafter, Hewlett-Packard started showeringR&D funds on inkjet technology, and the programme became a critical part of its future.

Canon ball

Meanwhile, Mr Endo had already started work on a broadly similar effort. Canon's goal was to create better xerographic technology, inkjets being just one of several options. Back in 1977, Mr Endo and his team focused on fabricating a piezoelectric system that could send electronic pulses through a nozzle, creating enough force to shoot ink from the chamber. But when a researcher accidentally touched the tip of an ink-filled syringe with a soldering iron, the squirt of ink changed the course of Canon's research and subsequent fortunes.

Within days, Mr Endo and his team used the discovery to build a simple inkjet printer that would come to be known as the Bubblejet. The main difference between this and HP's invention lay in how the ink was fired: Canon's shot ink out sideways, while HP's print heads released their ink from the top.

Two years later, Hewlett-Packard found out about Canon's work. The patents for many of the key inventions in both research efforts had been filed within months of one another. The result was a relationship between Canon and HP that continues to this day. Hewlett-Packard has borrowed some of Canon's designs for extending the life of the print head, while Canon has borrowed from HP's ideas for print-head configuration. Despite brief disagreements over rights to the technology, Hewlett-Packard insists that the co-operation has developed into a healthy competitive relationship between the two companies, and moved the state of the art further than it would otherwise have gone.

Following the two initial inventions, the development of inkjet technology became a multidisciplinary effort. New quick-drying and light-fast inks had to be developed. Improvements in the print jets continued apace. Better mechanisms for feeding the paper, and new software to improve image quality, were added. To raise speed still further, engineers on both sides developed faster motors and lightened their print-head mechanisms, while increasing the number of nozzles on their heads. More features were added to the inkjets, and soon hybrids of the technology that turned printers into fax machines and copiers emerged. Today, multifunction machines are the fastest-growing bit of the printer market.

The race to develop the inkjet printer had a profound cultural impact on both companies. For instance, disposable print heads, developed in 1984, are said to have caused no end of grief at Hewlett-Packard. The very thought of disposing of the little plastic units that contained the printers' intellectual property was anathema to some of HP's executives.

Other competitors entered the market with designs of their own. Epson introduced its inkjet line based on piezoelectric technology first investigated in the 1970s. Lexmark and Agfa also jumped in, focusing on specialised applications such as digital photography and graphic arts. But for all the interest, the growth of the inkjet market got off to a poor start. Compared with Hewlett-Packard's Laserjets, which were seeing healthy sales growth, the inkjet market appeared to languish after the company created its first Deskjet range in the late 1980s. At one point in the mid-1990s, HP even pondered pulling the plug.

Colour to the rescue

The widespread use of colour in computing during the mid-1990s changed everything. Just as Mr Vaught had planned, adding colour capability to inkjets was the next logical step. Print heads with complementary colours of magenta, cyan and yellow were added to black ink, enabling printers to create a full range of colours. More specialised photo printers have also added various shades of the primary colours to produce ever more faithful reproductions. “We essentially took all the work of craftsmen in a printshop and put it in algorithms,” says John Meyer, a director at HP's laboratories. As computers became ever faster, those algorithms allowed prints to become sharper and ever more vibrant.

Today, the inkjet is no longer a cheap substitute for a laser printer, but a graphics machine in its own right. The average print head now contains more than 300 nozzles and is capable of producing images with a resolution of at least 1,200 by 1,200 dots per inch—more than the eye can resolve. The average machine can now fire ink at a blinding 14,000 dots per second, depositing more than 1m drops of ink on a square inch of paper. Most of the development work is now going into creating durable, light-fast inks to prevent pictures from fading. Meanwhile, new software is helping to produce clearer pictures by controlling the printing pixel by pixel.

Ultimately, the development of the inkjet printer underscores how lateral thinking can yield remarkably simple solutions to complex problems. Both Mr Endo and Mr Vaught, who have shared numerous industry awards in recognition of their accomplishments, displayed dogged determination and belief in their inventions, despite much internal resistance. But in doing so, they revolutionised the computer business and brought colour to people's lives.

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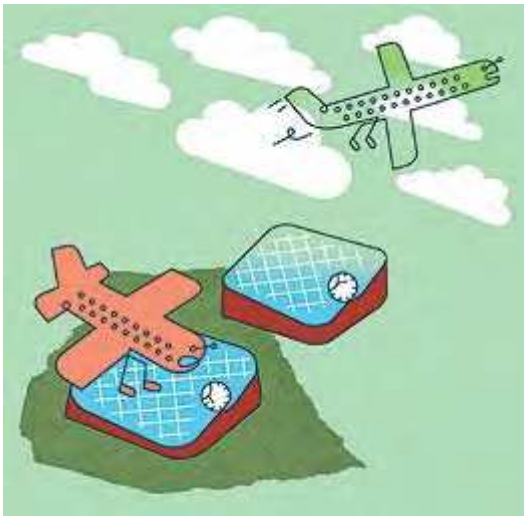
REPORTS

Desperately seeking lightness

Sep 19th 2002
From The Economist print edition

Composites: As they struggle for market leadership, Boeing and Airbus are having to rethink how they make aircraft, and what materials they use. Airbus is taking the bigger gamble, with its new super-jumbo, the 550-seat A380



SINCE Boeing acquired McDonnell Douglas in the mid-1990s, there have been only two aircraft companies (Europe's Airbus Industrie being the other) that are capable of building commercial jets with more than 100 seats. Over the next 20 years, the market for such aircraft is expected to be at least $1.2 trillion. Which of the two will take the bigger slice of that market?

There are few engineering tricks left that could give one or other a technological edge. There is little to choose in terms of the aerodynamic efficiency of their designs. The engines they use are identical. The latest version of either company's aircraft is only a few percentage points better than its predecessor. Long gone are the days when Boeing's 747 jumbos almost quadrupled the productivity of the Boeing 707s and Douglas DC-8s that they replaced, or the earlier doubling of productivity that those airliners made over piston-engined planes.

On top of that, customer finance is more or less equal. Government agreements now prevent flagrant subsidies on both sides of the Atlantic. Of course, the American and European governments still underwrite much of the research and development that underpins their respective aircraft industries. Even so, none of this has moderated the price war between the two companies.

It used to be argued that, once there was a clear duopoly in civil-aircraft manufacturing, aircraft prices would rise. That theory has been thoroughly discredited. The best indicator of new-aircraft prices—the average price per seat, adjusted for inflation—has been declining for several years, thanks to brutal competition between the two rivals. According to *Airline Monitor*, the cost per seat declined by 11% in real terms from 1995 to 2001, even though there was a booming demand for new aircraft. That leaves only aircraft weight (and its close cousin, manufacturing cost) as the key area in which the two makers can innovate.

Boeing's latest attempt to do so is its Sonic Cruiser, a radically new (and lightweight) aircraft which is intended to fly close to the speed of sound—ie, around 15% faster than today's conventional jets. But, lacking sufficient support from cash-strapped airlines, the concept remains a paper aircraft for the time being. Meanwhile, Airbus is pressing ahead with the use of composites in its new A380, the 550-seat behemoth that is now in full development and should come into service in 2005. Jens Hinrichsen, the director of structures at Airbus's large aircraft division, claims that, as the design now stands, around 40 tonnes (18%) of the A380's structural weight will consist of carbon fibre.

Two to tango

Airbus's efforts are being encouraged by the European Union. Under the EU's Fifth Framework programme, aeronautical research was allocated $630m for a five-year period ending this year. This programme includes the so-called Tango projects for encouraging the use of composite materials in civil aircraft, with the aim of cutting 20% from both the weight and the manufacturing cost of new European airliners. If that order of saving were achieved, it would be equivalent to an 8% reduction in direct

operating cost.

Tango is split into four main projects: an all-composite wing, plus the structure where it joins the fuselage; two rival fuselage programmes (composite versus metal); and a composite centre-section box that joins the two wings at the base of the fuselage. The projects are clearly designed to support Airbus's upcoming P322 programme, a 110- to 180-seat design intended to replace the Airbus A320 family. The P322 is to be launched later this decade. But already, work on one particular Tango element—the centre-section wing box—has been accelerated so it can be used on the A380. Altogether, $38m of Fifth Framework money is being spent on composite applications, plus an equal amount from the 35 companies participating in the research programme.

If that sounds like a backdoor subsidy, it is. And Europe's increase in taxpayer support for aeronautical research is happening just as American taxpayers' support for aeronautics and composites research by their own aerospace agency, NASA, is in decline. It is no secret that the EU intends to use these programmes to help Europe gain the lion's share of the large commercial-aircraft market.

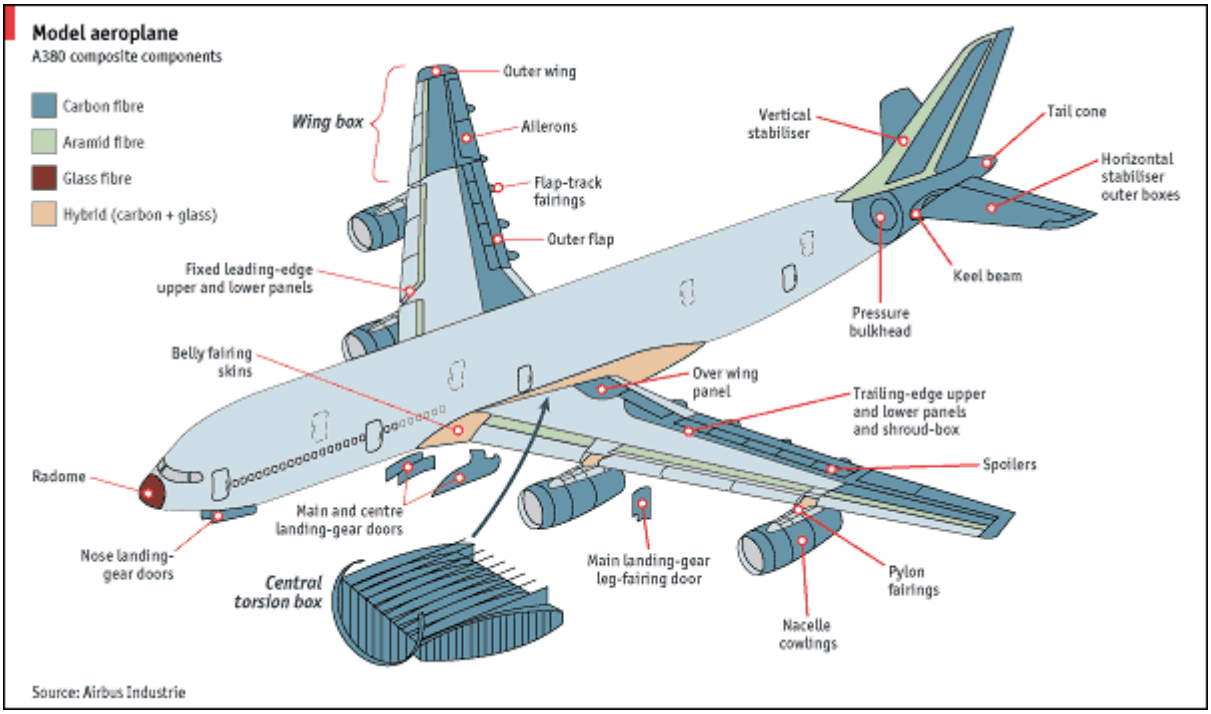
Crash diet

Shedding weight is crucial. For one thing, the heavier the structure the larger the engines needed to push it (and the extra fuel that is needed) through the sky. In turn, that means that less payload—passengers and freight—can be carried. Reducing the A380's structural weight by eight tonnes (around 3% of its weight) would cut 2% from direct operating costs—and on such differences are sales made.

A lighter plane is also quieter. That is because less power is required, and there is a smaller mass carving its way through the air. This second point is important when it comes to landing noise, since a lighter plane needs fewer noise-creating flaps and other devices to help it to slow down when landing. Moreover, a lighter plane is cheaper to make, since it requires less of the expensive materials that are used in aircraft manufacture.

Composites offer designers a way to lose weight, thanks to their better mechanical properties. But costly composites cannot be justified throughout an aircraft. For instance, an earlier version of the A380 design planned to use composites for the outer wing section, while retaining a conventional aluminium structure for the inner section. This idea was dropped for two reasons. First, given today's composite technology, it was hard to beat the cost of an aluminium wing. Second, the heavy joint needed to ensure that the loads between the two parts of the wing were transferred properly meant that there was no significant saving in weight.

Apart from all the carbon fibre going into the A380, another 4% of the aircraft will be made of a new hybrid composite material called Glare. This is a sort of multi-layered sandwich made of sheets of aluminium foil interleaved with carbon fibre. When it designed the 777 in the early 1990s, Boeing rejected Glare because it was untried at the time. But since then, Glare has proved itself amply. At Airbus, the use of Glare in the A380 fuselage will save 7% of the weight of the metal parts it replaces. It will also mean a much better fatigue performance (resistance to cracking caused by repeated flexing). The chart below shows where composite materials are to be used in the A380. What is clear is that composites have overcome doubts about the size of parts they are good for.



The rear of the plane is a good example. The A380's pressure dome—a 16-metre high bulkhead at the back of the double-decked cabin—is to be made by automatically laying fibres into moulds, a process well suited to structures involving double curvatures. The composite material for the job costs $115-125 a kilogram, compared with $20-30 a kilogram for the aluminium it replaces. But aluminium would require many panels, and the stretch-forming process used to make these involves a huge waste of material. The reduction in the number of panels also cuts assembly costs—in labour as well as in expensive fasteners. Better still, there is a 10% saving in weight.

The unpressurised section of the rear fuselage, between this bulkhead and the tail, may also be partly composite. Massive metal forgings and frames will be needed to carry the aerodynamic loads of the tail surfaces, but the skin and the rest of the structure (56% of its weight) will be made of carbon fibre. Instead of the 16 aluminium panels that are needed in a conventional metal design, there will be four composite panels, making a net weight saving of 12%. Airbus engineers expect a further 4% saving in the cost of assembling this section of the aircraft.

One of the biggest lessons that Airbus engineers have learnt is that the greatest savings accrue when the design of a part is not simply replicated in “black metal” (a reference to the shiny black colour of carbon fibre). The real pay-off is when the design is rethought to take full advantage of the composite's properties—and not just its strength-to-weight superiority. For instance, by careful design, components built out of a composite material can be made in a single, accurate piece, eliminating costly rework as well as heavy bolts and rivets. That means external surfaces can be a good deal smoother, reducing aerodynamic drag, and saving both fuel and further weight.

“The real pay-off is when the design is rethought to take full advantage of the composite's properties—not just its strength-to-weight superiority.”

Several different manufacturing methods are being used for the composites on the A380. There are still a large number of parts in which the composite—mostly in the form of sheets and tapes of carbon fibres pre-impregnated (“pre-preg”) with resin—is laid into moulds by hand. The size of the parts made by hand is limited, because of the difficulty in aligning the fibres accurately over large sections. As a result, hand-layup tends to be used for making one-off prototypes or for less critical parts of an aircraft, such as “fairings” that simply smooth the airflow.

Fewer hands, more machines

To save labour and produce composite parts with greater consistency, aircraft manufacturers are learning to automate their production processes. For instance, the floor beams for the A380's upper deck are to be made in Japan using a continuous process akin to extrusion. In “automated tape laying”, pre-preg tape is wound into a mould or on to a mandrel. That works well for simple shapes such as circular tubes

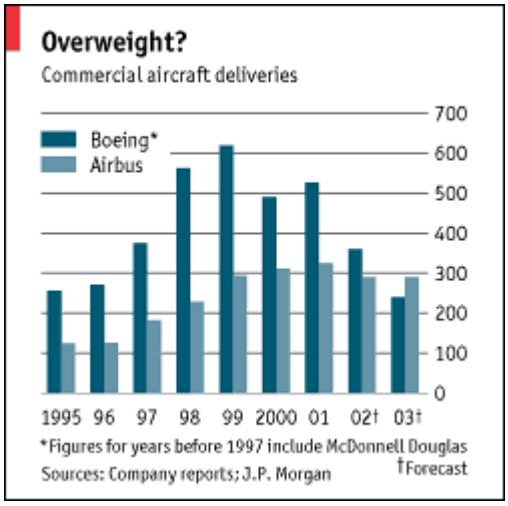
or box-sections. But for more complex shapes, a process known as “automated fibre placement” has to be used to wind the pre-impregnated fibre precisely around the component's intricate contours.

The result is very accurate, high quality parts—but at a price. Some of these parts require double-sided moulds. And all of them have to be placed in a vacuum bag—to squeeze the air out of the resin and ensure good bonding—and then cured at temperatures of up to 200ºC in a costly oven called an autoclave. To complicate matters even further, pre-preg composites have to be kept refrigerated up to the moment that they are wound on to a mould, in order to prevent the resin from beginning to cure.

Hence the trend towards so-called “resin infusion”. This uses a single-sided mould into which dry fibre is placed. This material is then stitched together using techniques borrowed from the textile industry. Parts made in this way can be extremely complex. The “ribs” and “stringers” that form the inner structure of a wing can be sewn into place, with the fibres aligned precisely to gain the maximum strength. When the resin that bonds the fibres into a composite is injected, a complete part is made in one shot. This technique was demonstrated (on a Boeing 737-size wing) by NASA engineers as part of a $300m programme that ran for ten years until 2000.

One novel technique that has caused a stir among aircraft engineers is a process developed by Quickstep Technologies of Perth, Australia. This uses a bath of heated water or oil instead of an autoclave to do the curing. The component being fabricated is enclosed in a vacuum bag and the internal pressure is then reduced moderately. The bag is dunked in the bath of heated liquid, which is then vibrated to ensure that all the air is shaken out of the resin so that a good bond can be made. Quickstep claims that this produces high-quality parts at a much lower cost.

A different approach to cutting costs is being taken by GKN, a British engineering company. One of GKN's American subsidiaries is applying basic production-engineering know-how to making composite parts. It groups machines into “manufacturing cells” to get better throughput, and uses automated multi-axis machines to lay fibre, trim parts after moulding, drill holes and so on.



A generation behind

Composite technology today is where aircraft alloys were in the 1960s. Progress with the material is making rapid strides, but supplies are still limited. And the suppliers themselves are small, undercapitalised and due for a shake-out. No fewer than 800 suppliers from around the world had stands at a recent exhibition in Paris. The American Department of Energy reckons that the world market for aviation-quality carbon fibre is around 6,800 tonnes a year, with 60% of that going for military use. A quarter of America's F-22 fighter is made of fibre and over a third of the new Joint Strike Fighter will be made of composite. Even at a low production rate of two aircraft a month, the A380 will require a further 960 tonnes a year. Some industry insiders worry that this sudden increase in demand could outstrip supply. What will happen, they ask, if one of the large car makers comes out with a popular sports car made of high-grade carbon fibre—along the lines of the Lotus Elise?

Composites face other challenges as well. The metals producers are not standing still. Laser-welding and other fabrication processes are now being used to reduce weight and assembly cost. That alone probably makes an all-composite commercial airliner unlikely. Another problem for composites is how to repair them. Airlines need to have handy repair methods—akin to riveting patches over damaged parts—so that they can get damaged aircraft back in service quickly. There are also questions over how to detect potential weaknesses in composites, following the failure of the composite fin on an American Airlines A300 that crashed in New York in 2001.

“The question now is whether Airbus's technological assertiveness will win it the lion's share of that $1.2 trillion feast.”

For the time being, Airbus is ahead in using composites in commercial airliners. It has a record of being more aggressive than Boeing in adopting new technology. But, then, so did McDonnell Douglas—although its demise had more to do with low overall investment than taking technological gambles. The question now is whether Airbus's technological assertiveness will win it the lion's share of that $1.2 trillion feast. One thing is clear, however: ensuring that it does is now official

policy in Brussels.

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REPORTS

Computers that run themselves

Sep 19th 2002
From The Economist print edition

Computing: For decades, scientists have concentrated on making computers more powerful. Now they want to build systems that are smart enough to look after themselves

YOU want to dash for a bus on the other side of the street. But imagine that, instead of your brain automatically giving you a dose of adrenaline, speeding up your breathing and calculating all the right movements autonomously, you had to perform each of these functions as separate acts of conscious deliberation. The chances are you would stumble before even stepping off the kerb. In many ways, such is the state of information technology today—at least in IBM's view.

Computer systems and their “organs”—eg, microprocessors, applications and networks—are becoming ever more powerful. But they are also becoming ever more complex, and so have to be managed by a fast-growing army of information technology (IT) worker bees. This development has been a boon for IT services firms, and in particular IBM's Global Services, which now accounts for almost half of Big Blue's revenues. But these companies also know that simply throwing people at the problem is no solution. That is why, last October, IBM launched an initiative called “autonomic computing”, which is now starting to gain serious attention.

The goal is nothing short of building computer systems modelled on the part of the nervous system that is “autonomic”—ie, the part that governs involuntary body functions such as respiration and heart rate. “It's time to design and build computing systems capable of running themselves,” writes Paul Horn, IBM's senior vice-president of research, in the initiative's “manifesto”.

Welcome to the club, say competitors, especially Sun Microsystems (IBM's arch-rival), which claims to have moved along similar lines for some time. But Dr Horn's manifesto could, one day, be seen as marking the turning-point when the business started—after several unsuccessful attempts—to change its ways in earnest. Instead of focusing primarily on performance and new features, the industry now has a chance to spend more on making things actually work.

Recent marketing campaigns show that IT firms have suddenly discovered increased demand for things such as reliability and availability. Oracle praises its databases in adverts as “unbreakable”. Microsoft wants to be the champion of “trustworthy computing”. IT consultancies are pushing similar themes. Forrester Research of Cambridge, Massachusetts, recently coined the term “organic IT”. By this, it means IT infrastructure “built on cheap, redundant components that automatically shares and manages enterprise computing resources.”

It is no accident that the IT industry should now be focusing on things other than raw performance. Chips have become so powerful, disk space so cheap and networks so fast that other aspects of computing have risen in relative importance. At the same time, the cost of downtime is increasing. A stockbroking firm can lose $6m or more if its computer system is down for an hour.

Efforts to come to grips with the increasing complexity of computer systems are nothing new. In 1968, NATO sponsored a conference dealing with the “software crisis” which was said to be undermining the economy and defence of the western world. Then there was “fault-tolerant” computing, focusing on redundant hardware, which Tandem Computers (now part of Hewlett-Packard) turned into a business. Autonomic computing is meant to go further, embracing not just software and hardware but all parts of computing systems as well.

Feeling blue

In IBM's view, an autonomic computer system—itself a collection of more or less self-regulating systems—needs to possess many of the characteristics of the human body. For instance, it must have an identity; be able to adapt to a changing environment; be capable of healing itself; and have an immune system. In computer terms, this means that an autonomic system has to know its own resources, and be able to reconfigure itself, to call up redundant elements in case of a malfunction and to destroy computer viruses automatically.

This is a tall order that will take decades to fill, as Dr Horn is the first to admit. But IBM's Thomas J. Watson Research Centre in Yorktown Heights, New York, is already working on the elements of such autonomic systems. One project is the firm's next generation of supercomputers, code-named Blue Gene. These machines will have more than a million processors, each capable of a billion operations per second (one gigaflop). Together, they will be 100 times more powerful than IBM's fastest computer today. As such, they will be capable of tackling some of the most complex problems imaginable—such as figuring out how proteins fold themselves into their distinctive shapes.

Given such a large number of processors, on average one will fail every four days (usually as a result of damage by cosmic rays). But instead of requiring technicians to rush to replace them so that the machine can keep running during long computations, Blue Gene will be engineered to be fault-tolerant. In other words, it will detect failures and automatically reroute tasks to working processors.

“The complexity of today's computing will, in the not too distant future, outgrow the human ability to manage it.”

Blue Gene will not be up and running before 2004 at the earliest. But the result of another IBM project called “e-workload manager” will probably make its way into customers' hands by mid-2003. The idea here is to allow a computer system to prioritise its responses to different requests—and, if need be, to reconfigure itself to fulfill them. An online stockbroking firm, for instance, could instruct its system to make sure that a regular customer always gets a quick response, especially when there are many one-time users online merely checking free stock quotes. Today, such things usually have to be configured by hand.

Similar technology is already part of IBM's mainframes. Now the firm's researchers are extending it to distributed computing. At the heart of such prioritising technology are “adaptive” algorithms that learn from data that the system has already generated—for example, the computing load required by certain requests. A big challenge, says Donna Dillenberger, one of the project's researchers, is to teach the algorithms what to forget—in short, to determine which data are noise and which form a trend.

Such a skill will be essential when attempting to meet the goal of another IBM research project called Océano: to develop the prototype of a “computing utility power plant”. In contrast to today's shared-data centres, one main characteristic of these huge systems of thousands of server computers and data stores is to assign capacity dynamically—say, to an online shopping website during the holiday season.

Other computer firms are pursuing similar research—and, in some areas, are ahead of IBM. Hewlett-Packard, for instance, has a project called “planetary computing”. Researchers at HP's laboratories in Palo Alto, California, are working on a data centre with as many as 50,000 servers. The plan is to have such computing installations spread across the world and linked via super-fast fibre lines.

This network of giant data centres, Hewlett-Packard hopes, will turn computing into a utility on a global

scale. The system would fire up servers whenever and wherever a customer needed additional capacity. It would place data globally so that it could be accessed anytime, anywhere. Moreover, it would monitor itself, automatically rerouting data traffic from a broken server to a working one.

Sun Microsystems, for its part, is already past the prototype stage. In the imminent future, the firm will introduce its much awaited “N1” initiative. This is essentially an operating system for data centres that turns the whole network into a computer—Sun's goal since its beginnings. Like HP's efforts, the core concept of N1 is to “virtualise” computing systems—building and rebuilding them as needed from subsystems such as servers and storage units connected to the network.

Broody computers

Research projects related to autonomic computing at universities are less grand, but often have more interesting approaches. Instead of building huge data centres, John Kubiatowicz and his team at the University of California, Berkeley, plan to federate thousands of personal computers on people's desktops into one huge data store called OceanStore. Because encoded fragments of a file can spread over hundreds of hard disks, the file can still be reconstructed even if computers containing parts of it fail.

OceanStore is part of Dr Kubiatowicz's research into what he calls “introspective computing”. As the name implies, it is about enabling computer systems so that they can continuously monitor their own inner workings, analysing those data and optimising themselves so that they become less crash-prone. This raises the interesting possibility that a machine might have to “sleep” and even “dream” regularly to become truly autonomic.

The idea of recovery-oriented computing (ROC), an effort led by David Patterson, another Berkeley computer-science professor, is equally unusual. It is based on the premise that accidents happen. Software will always have bugs; hardware will fail sooner or later; and humans will invariably make mistakes. Instead of simply trying to avoid failures, Dr Patterson argues, computers should be able to recover from them quickly.

To make its point, the Berkeley ROC group built an e-mail system with an “undo” feature like that in most word-processing programs. It records all its activities. Should a virus crash the system, the administrator can rewind it and fix the problem. To make such binary time travel possible, the system has to save an enormous amount of data. But with hard-disk space so cheap, this drawback will make little difference.

Making computing really work is not just a question of technology, argues Dr Patterson. If the IT industry has managed to increase performance 10,000-fold in the past 20 years, he says, it is because such things as chip speed and storage capacity are easy to measure. But finding the right metrics for, say, the recovery-friendliness of a system is much more difficult. To start the ball rolling, Dr Patterson recently developed a simple way to estimate the cost of downtime—by computing the time wasted by employees who cannot get their work done because of computer problems.

There is another economic reason why autonomic computing might not be adopted as quickly as advocates would like. In the past, at least, IT firms had an interest in making computing more complex than was strictly necessary—in particular, by the way they made their equipment proprietary. But autonomic computing, says Dr Horn, will work only if the IT industry fully embraces open standards. That is beginning to happen, but only grudgingly and only where absolutely necessary.

Yet something rather like autonomic computing will surely exist one day, if only because the complexity of computing will, in the not too distant future, outgrow humanity's ability to manage it. This raises the question of how autonomic do users want their computers to become? The case of HAL 9000, the computer in the movie “2001: A Space Odyssey” which could be stopped only by pulling the plug, suggests that there ought to be some limits.

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LAST WORD

The other Bill

Sep 19th 2002
From The Economist print edition

For a quarter of a century, Bill Joy—"the Edison of the Internet"—has envisaged a world in which countless devices are wired together. Now he is trying to turn that vision into a reality, but not without warning of the risks to society

Bill Joy, networker-in-chief

"OPERATING systems", Bill Joy once declared, "are like underwear—nobody really wants to look at them." For more than 25 years, the mantra that computing should remain simple and that operating systems should be hidden in the background has been a guiding principle for Mr Joy, chief scientist and co-founder of Sun Microsystems. That quest for simplicity has made him one of the most influential and prolific inventors in the computer business.

Part-scientist with the necessary scruffy hair and crumpled clothes, and part-businessman with a keen sense of marketing and strategy, Mr Joy has had a hand in developing almost every crucial technology for the Internet of the past two-and-a-half decades. He is also credited with dreaming up the technologies that made Sun what it is today. In the 1970s, he turned Berkeley Unix into the leading operating system for mainframe computers and servers. In the 1980s, he helped to design the Sparc microprocessor that is the heart of Sun's successful server business. In the 1990s, he spearheaded the development of the Java programming language for portable Internet applications. Today, he is leading the push into distributed computing, popularised by "peer-to-peer" techniques.

Through it all, he has focused on moving the complexity of computing from the desktop to the network where, he has long argued, it can be managed more easily, and without the user noticing. In 1988, that vision was crystallised in Sun's enduring slogan: "The network is the computer." In the decade and a half since setting Sun's agenda, Mr Joy's vision has turned the company into an $18 billion powerhouse, with products that are the very heartbeat of the Internet itself.

If Mr Joy were to have his way, however, the future of computing would rest on a mere 50,000 lines of computer code that make up his year-old initiative called JXTA (pronounced "Juxta"), which seeks to build standards and infrastructure for peer-to-peer computing. First announced in 2001, JXTA is the culmination of a decades-long effort to build and popularise the infrastructure for distributed computing. At stake, say proponents, is the complete rewiring of the Internet—an undertaking that promises to unleash a whole new wave of software innovation that Sun hopes to ride successfully.

Bill Joy's impact on computing began back in the mid-1970s at the University of California, Berkeley, where researchers were pioneering a new kind of computing architecture. Their aim was to make it easier for computers to communicate with one another—and, in the process, to encourage the development of what were to be called personal computers. Bill Joy, then a young man from Michigan, had opted to do his masters degree at Berkeley because the campus had the worst facilities of any that accepted him—and therefore, he felt, offered the greatest challenge. "At Berkeley," says Eric Schmidt, an old friend who is now boss of Google, an Internet-search firm, "there were graduate students, and then there was Bill Joy."

It was Berkeley Unix that made him a legend in the computer industry. The Unix operating system was developed at AT&T's Bell Laboratories in the early 1970s and had been distributed freely to government organisations and universities for use in their mainframes. At Berkeley, Mr Joy and his colleagues began

tinkering with it to fix bugs in the code. Their improvements quickly caught the eye not only of other universities, but also of the Pentagon. In 1978, Mr Joy and his colleagues were awarded a contract by the Defence Advanced Research Projects Agency, to develop an operating system that could connect Digital Equipment's widely-used VAX super-minicomputers into a fledgling network that DARPA called “the Internet”.

By integrating a recently-devised communications protocol called TCP/IP with his version of Unix, Mr Joy helped to lay the foundation for the popular use of the Internet. In short order, the Berkeley Systems Distribution (BSD) of Unix became the most widely used operating system of its day. Even now, the various incarnations of BSD remain the main rival for Microsoft's NT/2000 operating system on servers. It is also the basis of Apple's OS X operating system.

Fast forward to 1982, when three Stanford graduates, Vinod Khosla, Scott McNealy and Andreas Bechtolsheim, persuaded Mr Joy to create the software for a cheap but powerful computer they had built called the S.U.N (short for Stanford University Network) workstation. The Stanford trio hoped to take Unix from the realm of universities and research laboratories into industry. And while the group never expected Mr Joy to be a wizard chip designer as well as a software genius, two years later he and a colleague, David Patterson, developed a new microprocessor that raised number-crunching to a new level of performance. Ever since, Mr Joy's RISC (reduced instruction-set computing) processor has been the mainstay of the company's $10 billion server business. In the process, Sun Microsystems has become the world's leading supplier of networked workstations.

“As technology becomes ever more accessible to ever more people, they become ever more reliant upon it.”

From the beginning, the central theme in Mr Joy's work has been to tie microprocessor-controlled systems together into a unitary whole. As early as 1978, he envisaged a world in which electronic devices would be sprinkled into everything, from thermostats and washing-machines to shoes and clothing, all communicating with one another in a sort of information ecosystem. To make this happen, he seized on the concept of “distributed computing” (ie, peer-to-peer computing) to unleash the power of every device, while allowing computational problems to be broken down into smaller, more manageable pieces.

At the time, such an idea seemed ridiculous. Desktop computers were simply not kitted out for such work. Besides, the notion of tethering independent computing devices into a single system was fraught with management problems. For instance, there was no way of telling which unit was working and which was not, or which processor was actually managing the resulting network and how it might pass control to another processor if it went on the blink.

The first clue as to how to make distributed computing work came in the 1980s, when Sun started developing a new operating system, called Oak, for interactive television—an application that proved to be ahead of its time. But by the early 1990s, when the World Wide Web took off, Mr Joy realised that Oak held the key. Building on that, Sun came up with a new programming language called Java. This permitted information to be shared as “objects”, complete with data and a way of analysing them.

Java's attraction was its ability to create small, efficient programs that could be sent easily over the Internet and, in theory, run on virtually any machine. Its simplicity, Mr Joy insists, helps to produce far more reliable and more secure programs. That makes them ideal for small, embedded computing systems such as mobile phones and portable gadgets. In 1999, Mr Joy took his vision a step further with Jini, a networking technology that uses Java to make connecting devices together much easier—allowing, say, a digital camera to communicate directly with a printer without having to use a PC as an interlocutor.

Juxtaposed

In the three years since Jini was introduced, the concept of peer-to-peer computing has itself gained ground, thanks largely to the growing power of personal computers. Today, even the simplest of computing devices has more than enough processing power to connect direct to other processors, without needing the help of a central server.

But once peer-to-peer computing became a fad, dozens of companies, each with its own proprietary system, rushed for a piece of the pie. The chaos threatened to make the whole thing unworkable. What was needed, argued Mr Joy, was an organisation to build the foundations for this new style of computing,

allowing the peer-to-peer companies to do what they do best—develop applications.

Hence JXTA. With his colleague Mike Clary, Mr Joy secretly launched the project in 2000 as a way of organising software developers and establishing standards for peer-to-peer computing. All told, JXTA is based on six protocols that let peers (ie, individual computers) find one another and organise themselves into groups. Ultimately, it appears rather like an operating system for running a peer-to-peer network. Mr Joy likens it to the TCP/IP stack of software that he added to Unix in 1982 so that computers could connect to the Internet. And, as happened with BSD Unix, Mr Joy is determined to make his open-source JXTA the standard for peer-to-peer networking.

What does Sun get out of this charitable undertaking? Mr Joy insists that Sun does not intend to make money out of JXTA. What it would like to do instead is create a market that would generate a demand for its products and services. Yet, if peer-to-peer is intended to bypass servers, surely JXTA can only nibble away at Sun's core business of selling such machines? Mr Joy believes not. He insists that it will boost demand for servers in high-value applications such as transaction processing and databases, where centralisation is indispensable.

The corollary to Mr Joy's quest for simplicity is that, as technology becomes ever more accessible to ever more people, those people become ever more reliant on it. This has begun to trouble him. He fears that the speed of technological development may exceed humanity's moral and mental capacity to control it. He first fretted about this in an article for *Wired* entitled “Why the future doesn't need us”. In particular, he wrote of the dangers of the “GNR (genetic nanotechnology robotics) revolution”, saying that this putative technology could smother the human race into extinction.“This is a story that discovered me,” Mr Joy admits. “I just happened to discover that what I saw as a problem no-one else seemed to be talking about.”

Mr Joy was just blocks away from the World Trade Centre on September 11th 2001. For him, the events of that day were a clear warning of the risks people face in the modern world. Being singular in nature, such events are almost impossible to prevent scientifically. And yet, technology proved to be the enabling force for those who wished to harm others. “Bill's job is to challenge the conventional wisdom,” says Mr Schmidt. “He has been thinking about these things for years, but it took until now for all of them to come together.” Bill Joy's message is simple and succinct: “We must keep our euphoria with technology in check.”

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Airlines

So many planes, so few passengers

Sep 19th 2002
From The Economist print edition

Reuters

Things go from bad to worse for big airlines, and not just because of September 11th

Get article background

SOON after terrorists destroyed the World Trade Centre using hijacked planes, Ryanair launched an aggressive campaign in doubtful taste. Using a pastiche of a first-world-war recruiting poster with Lord Kitchener's pointing finger, Europe's second-largest low-cost airline proclaimed, “Let's fight back”. To strengthen timid hearts, it promised seats for under £10 ($15). Amazingly, the strategy worked. Passengers flocked to Ryanair and its rival easyJet, which embarked on similar aggressive discounting.

The reaction of the big, established network carriers in Europe and America was quite the opposite: they slashed capacity by 15-20%, anticipating (correctly) a slump in their passenger numbers. Even though they in turn have cut their high fares, their passenger numbers are still running well below pre-September 11th levels. The recovery which started in America in January fizzled out in the early summer, as business travel remained depressed and many corporate “road warriors” were told to fly low-cost or not at all. American carriers, which lost $6 billion in 2001, look like losing even more this year.

In Europe this week Michael O'Leary, the combative Irish boss of Ryanair, was banging his big drum again, launching a week-long giveaway of 1m free tickets for flights in the slack fourth quarter of the year. This, he hopes, will end the recent fashion for criticising his airline over lost bags, delayed flights and overworked pilots. But, complaints notwithstanding, the market says he is doing things right.

While British Airways' traffic is down by 10% this summer from year-ago levels, Ryanair's numbers are up by about 40%. Nor does cheap mean profitless. This month British Airways has fallen out of London's FTSE 100 index of leading shares; Ryanair's market capitalisation has long exceeded that of Blighty's flag-carrier.

The same pattern has emerged in America, where the only consistently profitable big airline is Southwest—now worth more than the big six network carriers added together. JetBlue, a small but growing low-cost airline, is also winning rave reviews from American

passengers.

The unfriendly skies

Last month, US Airways became the first of the big American carriers to go bankrupt since the post-terrorism government bail-out. United Airlines, still seeking the labour concessions it needs to qualify for a second dollop of federal aid, may soon follow it into Chapter 11 bankruptcy. United has cash, but is burning it fast. Its biggest problem is that workers own 55% of the firm and, in effect, dominate the board. The employee-shareholding scheme that rescued the airline eight years ago when pilots and other staff traded salary for shares has soured. For all the supposed attractions of worker-owned firms, United's employee-capitalists seem unable to act in their collective long-term interests.

But each of America's network carriers is now into a second phase of adjustment to the crisis. Last year's big cuts in capacity and jobs were not sufficient. With fuel and security costs soaring, and revenues dropping, they are in penny-pinching mode. Service quality is falling. Forget about free drinks and snacks, let alone happy flight crews. In part to encourage cheaper-to-provide direct bookings by phone and Internet, most carriers are now charging $20 extra for paper tickets. They are tightening conditions on refunds and scrapping corporate discounts on cheap fares.

But bigger changes loom. The essence of what a network carrier offers, through its hub-and-spoke system, is many destinations and frequent flights through connections at hubs. In normal times, this minimises the revenue risk of not filling aircraft. But to ensure slick connections at peak hours for high-fare business travellers, aircraft have to hang around at hubs.

Low-cost point-to-point carriers mostly provide flights between two places, without the swift connections available at a hub—relying on low fares to attract enough business. But they work their aircraft and crews harder. According to Aviation Economics, a London consultancy, low-cost carriers get 11 hours flying per day out of each aircraft, compared with only about nine hours for a network carrier.

Recently, American Airlines, which invented the hub-and-spoke system, has been squeezing more flying hours out of each aircraft by spreading connections over a longer period. Business passengers are no longer willing to pay premium fares for slick connections. So American, closely watched by its rivals, is spreading out its flights in a “rolling hub”, holding fewer aircraft on the ground to provide peak-hour connections.

Even so, traditional carriers remain essentially in a different business from their low-cost rivals, because their networks are more complex. And they have all the historical baggage of unions, entrenched working practices and so on. So it is very difficult for a network carrier to reinvent itself as a low-cost carrier.

A plague of low-costs

Trapped between the rampant low-cost carriers and depressed demand, what else can the big European and American carriers do? Mergers face severe antitrust hurdles. United, for instance, was blocked from buying US Airways 14 months ago, and foreign-ownership rules stymied BA's attempts to hook up with KLM of the Netherlands. So United and US Airways are seeking permission to form a marketing alliance to sell seats on each other's flights by sharing flight-designation codes. Also, Delta aims to join up with Northwest and Continental, an allied pair since 1998.

If approved by the American authorities, these alliances could re-shape global aviation. Similar alliances are forming in Europe, where Iberia and BA are close and Air France is in talks with KLM. This Franco-Dutch rapprochement, plus Delta cosying up to Northwest and Continental in America, could lead to the transatlantic partnership of KLM and Northwest being subsumed into the international Skyteam alliance built around Delta and Air France. Privately, most industry leaders believe there will soon be three groups of international allies, led respectively by American, United and Delta on one side of the Atlantic, and by BA, Lufthansa and Air France on the other. This will put pressure on smaller European flag-carriers to drop long-haul routes and become mere regional feeders.

Ray Webster, boss of easyJet, reckons that low-cost carriers will take over most intra-European air travel before the end of the decade, with trains providing the main competition. In America, Frederick Reid, president of Delta, said on September 18th that he expected low-cost carriers to double their share of

the American market to 40% “in the near future”.

Unsurprisingly, Mr Reid also saw a role for transnational hub-and-spoke operators. The attacks on September 11th may be only partly to blame for the woes of big network airlines. But the way they aggravated the industry's underlying flaws is likely to lead to a widespread re-shaping of it, featuring a polarisation between international networks on the one hand and regional, short-haul, low-cost carriers operating point-to-point on the other. Certainly, any industry that earns a mere 2.9% net margin on sales in the best of times (as airlines did during booming 1997) is long overdue for an overhaul.

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Airport security in America

Bad answers to a nasty problem

Sep 19th 2002 | NEW YORK
From The Economist print edition

Who should be responsible for defending airlines against terrorists?

ONE of the lessons from the massive damage caused by the September 11th attacks is that everyone has a stake in aviation security, regardless of whether they choose to fly. A result is that fresh questions are being raised about who should be responsible for providing, and paying for, a service that may cost close to $10 billion over the next five years in America alone.

Whatever the answer, the current system, despite extra government spending in the past year, is a mess. There was a serious terrorist attempt in December by a man boarding in Paris who packed his shoes with explosives, and in August a woman was picked up carrying a handgun as she transferred from one domestic American flight to another. In America, where concern is greatest, in the first seven months of this year over 200 terminals were evacuated because of security alerts. As part of a nationwide sweep, 110 people (including a pilot) were indicted on September 17th for using false information on applications for jobs in restricted areas of Denver International Airport.

Glaring weaknesses exist in three areas: poor screening of passengers and luggage, porous barriers to facilities and equipment, and vulnerable computer systems. Addressing any of these is a massive task. By the end of the year, for example, machines capable of scanning bombs and plastic explosives in luggage are required to be installed by every major American airport. This equipment is costly ($750,000 to buy and as much again each year to maintain), large (in excess of 16 feet long), inaccurate (one false alarm for every five bags), and scarce (1,100 units are needed, seven times the number in operation a year ago). For all these reasons, as many as 40 of the country's 429 biggest airports may be unable to meet the installation deadline. Because all air transport is linked, any gap may undermine the entire network.

One response would be to give airports (and airlines) more room to improvise by freeing them from federal requirements. An economic analysis published by the Federal Reserve Bank of St. Louis challenges this view, concluding that leaving security up to each institution (which was largely the system until late last year) would produce under-investment (which it clearly did). The institution paying the most would involuntarily share the rewards (a “positive externality” in economics-speak) while still suffering from any deficiency in the weakest link.

Given the (still) small likelihood of any component of the system being compromised by a terrorist attack and the ability to free-ride on the efforts of others, the economically rational reaction would be to spend less than the socially desirable amount. A robust system would be likely only if all the participants were forced to act together, as under a federal programme.

A collective approach has its own problems, notably over-investment. As the government will be judged only by safety, not on the cost-effectiveness of transport, subtle expenses may be ignored, says Cletus Coughlin, an economist at the St. Louis Fed. The cost of passenger waiting time may be valued far less by a federal bureaucracy than by a for-profit firm: the use of busy airports could be unduly restricted. The government will also have a monopoly, vulnerable to such flaws as bloated administration, inflexible management and unresponsiveness to data. In short, there may be no foolproof method of ensuring airport security: another gloomy conclusion from the dismal science.

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Women's magazines

In vogue

Sep 19th 2002
From The Economist print edition

Why one part of the magazine business is fat and happy

MAGAZINE advertising is in its worst slump for decades. Ad pages are down, rate cards are under pressure and editorial content is being trimmed. So why does the September issue of American *Vogue* run to a staggering 750 pages and weigh over 1.6 kilos? Pick up four such brick-heavy titles to while away a plane journey and you could exceed your hand-baggage allowance with magazines alone.

Vogue is not the only doorstopper among the women's glossies this autumn, but it is the most arm-aching. Such is the inch-thick wedge of advertising pages inside this Condé Nast fashion bible that the first article does not appear until page 206. Its handbag-sized sister title, *Glamour*, runs to 326 pages in October, up by 17% from last year. The boom is not limited to America. The number of advertising pages in the October issue of *Glamour*'s British version is up by 77% from the same month last year. British *Marie Claire*, from the AOL Time Warner stable, crows on its October cover that this is its biggest issue ever. Its November issue will be 7% longer again.

Contrast this with the once-fat news and business magazines, including (to a degree) *The Economist*, but above all the technology titles. In the first eight months of 2002, the number of ad pages fell by 72% compared with the same period of 2001 at *Red Herring*, and by 46% at *Wired*.

What is going on? Part of the boom is seasonal. September and October, along with March and April, are always the fattest issues for the fashion magazines. They coincide with the autumn and spring catwalk shows, when the big fashion houses get the chance to display their wares not only through paid advertising but in gushing editorial copy. The New York shows began on September 18th, as soon as London's fashion week ended. A September issue, says Peter Kreisky, a media consultant, serves as a "directory of the fashion industry: nobody wants to be left out."

Some advertisers may be switching from business and news titles to the women's magazines out of fear that their products will be contaminated by association with bad news, which those publications now have in abundance. "I've got a number of advertisers who have told me: don't put me next to negative coverage of the economy," says Jeff Piper, who places ads in the American press for Carat, a media-buying agency. Plainly, not all products transfer neatly from business to fashion titles. But certain items, such as luxury watches, cars or mobile telephones, seem to be as content nestling next to articles entitled "I'm a monster in bed" or "The truth behind the Britney backlash" as they once were amid stories on corporate strategy.

Perhaps the most important reason, however, is the robustness of retail spending amid the general economic downturn. In particular, women seem to be spending as never before—even the circulation figures at *Vogue*, *Cosmopolitan*, *Glamour* and their sisters are racing ahead. Flick through the glossies and it is not just the luxury-goods houses—which have traditionally supplied the fashion magazines' aspirational allure—that are splashing out. GAP, for instance, a middle-market retailer, occupies 15 full advertising pages in the September issue of American *Vogue*.

For now, the retail-led boom shows no signs of abating. "There are so many huge new temples to fashion being opened, and they need to be promoted," comments Nicholas Coleridge, managing director of Condé Nast UK. Earlier this year, Prada, an Italian fashion house, opened swish new stores in London and New York. Giorgio Armani plans to open 18 new stores this autumn. Until the retail bubble bursts, the more new stores that open, the longer the magazines that flatter them will stay fat. The only trouble for fashionistas will be finding the muscle to carry both the bulging shopping bags and the bulky magazines that inspire their contents.

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European antitrust policy

Competing visions

Sep 19th 2002
From The Economist print edition

Britain is throwing down an antitrust gauntlet to Brussels

AP

There is only one Mario Monti

"WHY is there only one Monopolies Commission?" goes the old joke. Britain is preparing to have two, as part of a big shake-up of its antitrust policies. The new system, unveiled on September 16th, has uncomfortable implications in Brussels where Mario Monti's competition directorate is under pressure following a series of controversial rulings.

Britain's changes are part of a new Enterprise Bill now doing its final rounds in Parliament before becoming law, probably in November. Pushed by Gordon Brown, Britain's chancellor of the exchequer, the new rules have a clear moralistic streak. Cartels will be criminalised; individual company directors will face prison if caught breaking the rules. The current Competition Commission and the Office of Fair Trading will each gain greater powers to protect whistleblowers and prosecute offending firms.

It is on Britain's new merger policy, however, that most European eyes are focusing. The law will introduce a string of changes. Some are procedural, formalising a hitherto slightly shambolic system. Ministers will no longer be involved in merger decisions, with the Competition Commission itself having the final say. Both agencies will be upgraded—the Commission alone expects to hire around 70 new staff.

But the crucial change is that, in judging whether a merger should go ahead, Britain is shifting away from the analytical approach favoured by the European Commission towards a more American methodology. In the past, the British used an opaque and politically convenient "public interest" test to evaluate proposed mergers. In future, both of its agencies will apply a "significant lessening of competition" test straight from the American rulebooks. (As there is no agreement between the two agencies on exactly how the rules will apply, there is the slightly unsettling prospect of competition between them—much as sometimes occurs in America between the Federal Trade Commission and the Department of Justice.)

The European Commission uses a typically less permissive "market dominance" test, which has led to its rejection of huge deals such as that between GE and Honeywell. But the test, combined with procedural shortcomings, has put Mr Monti in a tight corner. In June, Europe's top court embarrassed him, throwing out his 1999 blocking of the merger of Airtours and First Choice, two travel firms. Appeals against two controversial blocking decisions are before the courts, with rulings due soon. The gossip is that Mr Monti's officials have had a mauling from the court. If the case against either deal is thrown out, there will be renewed pressure for far-reaching reforms within the merger unit.

Mr Monti has recently seemed to be responding to criticism. In July, he gave last-minute clearance to a hostile takeover involving two cruise-ship operators. That unexpected decision came about after he had instructed another team of officers to sit in on the work of the officers handling the case, to act as sceptical arbiters. Long-standing critics, while impressed, suggested this was just the kind of check and balance Brussels has needed all along.

Mr Monti has listened to complaints that he is too removed from his often dictatorial case officers. This month, he appointed Philip Lowe, an experienced British civil servant who has worked in the merger task force, as director-general of the competition unit. Reporting directly to Mr Monti, Mr Lowe's job is to sharpen up internal management. He is expected to do a thorough job. Whether he can shift competition policy so that there is reasonable prospect of a common European outlook—let alone a global one—is

another matter.

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The rise and fall of Elektrim

Poland last

Sep 19th 2002 | WARSAW
From The Economist print edition

Another fine mess for Polish capitalism

A SPECTACULAR plunge in the market capitalisation of a once hot stock, amidst evidence of a wholesale failure of corporate governance. Who said Europe's former communists could not embrace American-style capitalism?

Not long ago, Poland was seen as capitalism's best hope in the former communist bloc, and privatised Elektrim was the brightest star in the Polish firmament, cherished by patriots who hoped it would be their national champion. In the past week, due in part to the unforeseen consequences of nationalistic “Poland first” policies, the telecoms and power conglomerate filed for bankruptcy and fired its management for the umpteenth time.

Those who have watched the company lurch from one debacle to another, forever to be thrown a lifeline at the eleventh hour, know better than to predict its fate. But Elektrim's three-and-a-half-year roller-coaster ride involving risky acquisitions, chronic legal and financial woes, and last-gasp rescues by foreign partners is probably nearing its end.

Elektrim is a slimmed-down communist-era trading company that became a much-courted potential partner for European telecoms giants after it seized control of Polska Telefonia Cyfrowa (PTC), Central Europe's largest mobile-phone operator, in 1999. The firm's downfall is a case study of an east European firm with delusions of grandeur. Awfully ambitious, but perennially strapped for cash, the company tried to play off Deutsche Telekom against Vivendi Universal for control of PTC, only to incur the wrath of both giant multinational suitors in a protracted legal war.

This contributed to Elektrim's default last December on convertible bonds worth $440m. While it won a court-brokered reprieve to restructure its debts, disputed ownership claims over controlling shares in PTC hampered the sale of its telecoms assets, prompting it to pull out of a life-saving debt-rescheduling deal. Although the bankruptcy filing may be a ploy to secure partial debt forgiveness, and may have to be withdrawn if the new management wants to strike a deal with a group of bondholders to off-load its telecoms unit, the firm, whose market value slumped to a measly $23m from a high of $1.4 billion, is a shadow of its former self.

Indeed Elektrim's fall from grace is, in many respects, a microcosm of present-day Poland's: an exciting growth prospect with valuable assets, stymied by poor management and a bunker mentality. Just like left-wing government bigwigs who prefer national champions to foreign capital, the company was determined to become a stand-alone telecoms powerhouse. (Ironically, it was nonetheless run for years by a colourful American boss, Barbara Lundberg.) “Its critical mistake was to think it could build a Polish giant on its own,” says one seasoned observer of corporate Poland.

By the time it came to its senses and realised that it had to relinquish majority control of PTC in order to stay afloat, the telecoms boom had turned to bust, while its two jilted partners, Vivendi and Deutsche Telekom, had their own problems to attend to. Perhaps if Elektrim had taken its governance more seriously it could have improved its lot. Although numerous representatives of minority shareholders sat on the company's supervisory board, they often seemed to forget whose interests they served. An all too familiar tale.

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Hershey

Bitter-sweet

Sep 19th 2002
From The Economist print edition

Victory for a company town

NEVER underestimate the power of local politics in small-town America. Hershey Trust is the latest to capitulate before its might, announcing on September 17th the abandonment of its plans to sell its controlling stake in Hershey Foods, America's largest chocolate maker.

The charitable trust, set up in 1905 by Milton Hershey to fund a boarding school for the poor, has almost 60% of its $5.4 billion of assets tied up in Hershey Foods' shares. While the trustees had been diversifying, and anyway had more than enough money to meet the needs of the school for the foreseeable future, they still felt overly exposed to the fortunes of the chocolate maker. And when a rival food firm—said to be Kraft or Wrigley—inquired about buying the entire stake, they liked the prospect of a juicy premium for their control of the company and a more balanced portfolio.

The trust's sole beneficiary, the Milton Hershey School, is one of America's richest. But even the largest fortune can disappear, especially when undiversified. Minnesota-based Macalester College, once also one of America's wealthiest, learned the value of not putting all its golden eggs in one basket when shares in Reader's Digest, then 60% of its endowment, tanked in 1997. This year the college had to delay sprucing up its dorms and sports facilities.

But Hershey's trustees badly underestimated the local outcry when they announced in July their plan to sell. Protesters from the school, the company and former trust members joined residents of the Hershey company town in Pennsylvania—half of whom work for the company—outraged at the risk of lost jobs and of a foreign bidder stripping the town. Enter the state attorney-general, Mike Fisher, an ambitious Republican looking to boost flagging support ahead of the November gubernatorial election. He persuaded the lower courts to slap an injunction preventing the trust from entering into a contract with a bidder without court approval. Curiously, Mr Fisher criticised the trust last year for not diversifying. Insiders claim his chief deputy for charitable trusts, Mark Pacella, advised the trust board to sell Hershey Food's shares—something he denies.

Whatever the rights and wrongs, the trustees have not distinguished themselves. Peter Schoenfeld of PSAM, a hedge fund in New York, is “flabbergasted” that the trust was so overwhelmed by politics that it acted before an appeals-court ruling, due in days, that was expected to reverse the injunction. Perhaps the trust received advice that gave warning that legal obstacles could take years to overcome. Perhaps the likely buyers, a Nestlé/Cadbury consortium and the favoured Wrigley, demanded that all the legal issues surrounding a deal be resolved first.

The ultimate loser may be Hershey Foods. Although its new management is doing well, the firm is again protected from the risk of unwanted takeover, with all that can mean for dampening incentives and innovation. There may well be missed opportunities—a multinational owner like Nestlé could have taken Hershey's cheap chocolate into big new markets such as China. Hershey itself has never been able to persuade anyone but Americans to eat Hershey Kisses. So there may eventually be reason for the townsfolk of Hershey to regret this week's events. But for now their victory must taste exceedingly sweet.

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Coffee

Mug shot

Sep 19th 2002
From The Economist print edition

Coffee companies prepare for a roasting

Get article background

ENJOY the last few drops of that grande latte. Soon, thanks to Oxfam, a foe of both poverty and free trade, you might feel too guilty to stomach it. In a new report, Oxfam aims to shame the world's big four coffee sellers (Nestlé, Procter & Gamble, Sara Lee and Kraft) for “impoverishing 25m farmers” in poor countries. The global market for coffee has failed, it says, and needs a complete overhaul (read price controls) so that farmers can get more for their beans.

The plunging price of coffee over the past decade has certainly caused regrettable misery for many farmers. But while Oxfam lays the blame on fat-cat western companies, other forces are more deserving of its ire. New production in Vietnam—partly encouraged by international poverty-relief programmes—combined with vast increases in Brazilian productivity have helped to create a global abundance of coffee. Rich countries' trade barriers make it hard for farmers to switch to other crops.

Solving these problems is not as thrilling as crusading against rich, profitable western firms. Marketers' ability to extract $4 a cup from middle-class consumers explains why coffee is being lashed by the likes of Oxfam. Its new campaign is cleverly aimed at the anxieties of yuppies—a large proportion of its donors. Oxfam says that coffee farmers are pulling their children out of school. At the same time, the American television programme “Friends” dares to depict young, attractive New Yorkers sipping cappuccinos at Central Perk without a care. The shame.

Big coffee makers now stand accused of placing profits before people. Though they are probably blameless, expect the prudent ones to fight back by copying big oil companies such as BP and Shell, which cleverly became green-friendly in the face of mounting pro-environment sentiment in rich countries. Already, Nestlé has said that it will support a whole raft of moves to “manage supply”—though not (so far) to start paying all its suppliers higher prices.

Other roasters may well give in to Oxfam's spurious cries, unless they want to gamble with “reputational risk”—ie, having their names tarnished in the media—a huge gamble when a “pure” brand allows you to charge a small fortune for a cup of Java. Far better to use this as a marketing opportunity for “fair trade” coffees—beans for which buyers have agreed to pay over the market price. Starbucks, for one, sells only a little of this type of coffee, but the resulting publicity generates plenty of good customer feelings. Beans with a “fair trade” seal of approval have enabled Cafédirect, a British firm, to turn a small but decent profit; Oxfam even owns 25% of the company's shares.

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Business computing

Delete the workers

Sep 19th 2002 | SAN FRANCISCO
From The Economist print edition

Sun's covert nerd-reduction programme

IF THE number of Elvis impersonators continues to grow at the current rate, it will exceed the earth's human population around 2010, it is said. The nerds in the typical firm's IT support department are proliferating nearly as fast. According to IBM, growing complexity means that the number of IT workers required globally to support a billion people and millions of firms connected via the Internet—possible within the next decade—may be over 200m, two-thirds of America's population.

But fear not. Help is at hand for anybody who fears that their office is about to be swamped by Playstation addicts. It comes in the form of N1, a new sort of über-operating system unveiled on September 19th by Sun Microsystems, a computer maker. N1 will make it much easier to run corporate data centres—thus eliminating much of the work now done by armies of systems administrators.

N1's key concept is “virtualisation”—creating pools of resources such as computing power and storage capacity that can be used as needed. This is done by automating the work of systems administrators. Instead of having to load and configure software manually, they tell N1 to set up a computer system for them—which, assuming it actually works, takes hours rather than weeks. What is more, N1 claims to be self-managing, meaning that it can, say, allocate additional computing resources to a website that faces a sudden surge in demand. Since this means that the many different computer systems in a data centre can easily be re-configured, N1 in effect turns them into one single big system.

To do this, Sun has re-used technology that is already part of its high-end servers and storage systems. This required designing software architecture that is compatible with many different sorts of operating system. But the biggest challenge, says Yousef Khalidi, chief technology officer for N1, was in packaging the technology. It will only be adopted if the nerds who run corporate systems co-operate, which they might not do if it creates too rapid change or even loses them their job.

For this reason, the “virtualisation engine” that Sun will roll out soon will not include features that would scare the more on-the-ball nerds—say, software that automates the process of translating the concept behind a new service, such as online banking, into a computer system. This can wait until the basic system is entrenched.

It is not just Sun's nerds whose future is on the line. Its competitors are working on similar plans. IBM hopes that its eLiza project, part of Big Blue's autonomic computing initiative (see this article in the *Technology Quarterly*) will make its huge IT-services arm more efficient. HP intends to build enormous “utility data centres” containing more than 50,000 servers. Microsoft is yet to announce anything specific but has plans for virtualisation software, which will most likely form part of its Windows operating system.

Sun's established products look increasingly fragile thanks to the creeping commoditisation of its high-end servers and their operating system, Solaris. If N1 is as successful as Solaris, Sun might be able to replicate its current business model on a higher level: just like Solaris, N1 is based on open standards, but works best with pricey Sun gear. If not, Sun may suffer the same fate that it has in store for all those corporate nerds.

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Shoplifting

While stocks last

Sep 19th 2002 | PARIS
From The Economist print edition

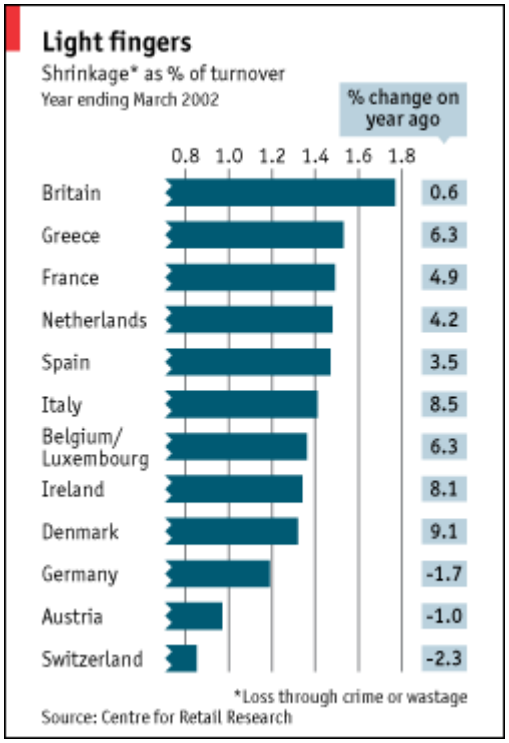
Thieves versus retailers

WHICH European country boasts the worst record for shoplifting? Step forward Britain, winner of this dubious honour for the second year running, according to a survey released on September 19th. Britons not only steal more than their continental counterparts, they are also less competent employees on the shop floor, resulting in Britain having the worst overall rate of retail “shrinkage”—a measure of losses by retailers from theft, mispricing and other wastage.

Continental Europeans are not much better. Shrinkage is increasing alarmingly in some countries and is generally on the rise. Consider staid Denmark. According to the survey, from the Centre for Retail Research at Nottingham University, shrinkage there is 9% up on last year. Danes remain relatively honest, but are fast closing on their neighbours.

Shrinkage costs the European economy a surprisingly large amount. Joshua Bamfield, who co-ordinated the study, puts the total annual cost at around *euro*30 billion ($29 billion) equivalent to a shocking *euro*80 per person in the region. That is more than the costs of the much-higher-profile car crime or domestic burglary. No directly equivalent American survey exists, but a recent poll among 30 of that country's top retailers found they lost an estimated $5 billion to shoplifting and employee theft in 2001, suggesting the problem there is on a similar scale.

Roughly half the losses in Europe come from theft by customers, who mostly home in on designer goods, electrical knick-knacks and, more bizarrely, vitamins and contraceptives. But almost *euro*8 billion of the theft is by companies' own staff, while suppliers manage to fiddle more than *euro*2 billion from retailers. Even so, it seems that some people still pay when they go shopping.



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Face value

A helluva problem

Sep 19th 2002
From The Economist print edition

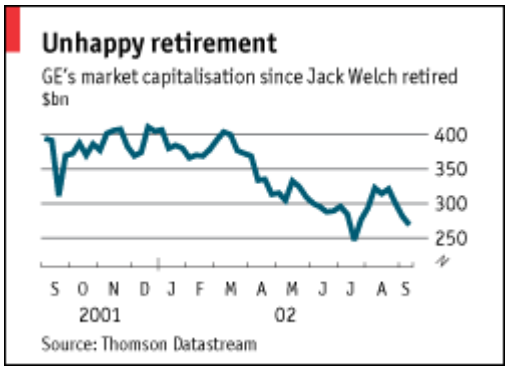
The lessons of Jack Welch's outrageous employment contract

AP

GENERAL ELECTRIC has not had it easy since its legendary boss stepped down last year. Yet as if under some abominable curse, Jack Welch seems to grow more virile as GE wilts. The conglomerate's share price sags, yet there is Jack, beaming from the newspaper pages, bouncing about in a noisy, extramarital way with the (now former) editor of the *Harvard Business Review*. There he is again, sporting the same cheeky grin, divorcing his second wife, Jane. Up he pops this week in the editorial pages of the *Wall Street Journal*, trumpeting and justifying his magnanimous refusal of millions of dollars-worth of apartments, private-jet rides, home-entertainment systems and other retirement perks that were due to come his way. At his request, he informs readers, GE has altered his contract, allowing Mr Welch to save the company from the wrath of its shareholders. Another lesson in leadership from the great ex-leader?

Mr Welch has a lot to say about his perks (a "helluva problem") whose size has emerged only thanks to papers filed by his wife during divorce proceedings. Mr Welch's employment contract dates back to 1996, when GE's board was anxious to press millions of dollars into his hands so that he would stay until his retirement at 65. Shocked by the wastefulness of this proposal, Mr Welch suggested that he be paid in kind, in post-retirement perks at (he says) less cost to the firm. There is a danger, he concedes, that by giving up these benefits, it will now seem as if he thinks something was wrong with these arrangements. But for the record, he insists, neither he nor GE behaved improperly, as all was disclosed to shareholders. Is he right?

One measure of how well Mr Welch disclosed his perks can be found at The Corporate Library, a website that keeps an eye on job contracts. Nell Minow, a corporate-governance activist who created the site, thought back in 1999 that Mr Welch's contract was "a tribute to Mr Welch and his board", guaranteeing no special bonuses, payments or perks. Ms Minow's only worry then was "some vague language in section five, which assures Mr Welch of 'continued access to company facilities and services comparable to those provided to him prior to his retirement, including access to company aircraft, cars, office, apartments, and financial-planning services'."



It was via this language that GE had been planning to dish out, on Mr Welch's estimates, between $2m and $2.5m of perks a year. Ms Minow understandably feels misled. The Securities and Exchange Commission is also looking into the adequacy of this disclosure.

Basic instinct

Whether or not GE's actions are found to be improper, Mr Welch's celebrated gut instincts are certainly sending him the right message now. It is proper, even desirable, for bosses who make their firm's shareholders much wealthier—as Mr Welch did spectacularly—to be handsomely rewarded. But it is crucial that they be paid in ways that are transparent to shareholders, and show clearly that the firm is being run in their interests and not those of the boss. This may, as Mr Welch recognised, mean that the

company has to pay in a way that is less tax-efficient. But that is worth doing so that the boss, like Caesar's wife, can remain above suspicion—as GE is now discovering.

As questions were raised this year about the quality of its accounts, GE mounted a formidable publicity campaign to put clear water between itself and clearly dissembling firms such as Tyco, a distressed conglomerate whose boss, Dennis Kozlowski, faces an assortment of criminal charges and who enjoyed countless perks from his employer. Mr Welch's perks could easily give the impression, no doubt unfairly, that he, too, has been living it up on his old firm's payroll. And, if that, some investors wonder, what else?

There are other bosses with generous contracts who would do well to follow Mr Welch's lead. Robert Nardelli, whom Mr Welch passed over for GE's top job, now runs Home Depot. His five-year contract there includes a $10m loan, to be forgiven (what sort of loan is that?) in $2m tranches over five years; bonuses, options and deferred stock in vast amounts; an automobile “similar in class to that of the current Mercedes Benz S600”; and a guaranteed minimum payment of $2.25m a year after he retires. You can almost hear his lawyer (kindly paid for by Home Depot) chuckling to himself.

There is no particular reason to pick on Mr Nardelli, although his GE provenance does suggest an interesting pattern. If Carly Fiorina, boss of HP, were in future to be sacked for mere incompetence, massive contractual payments would be triggered. Robert Annunziata, a former boss at Global Crossing, a bankrupt telecoms company, got first-class flights for his mum written into his contract. And so on.

America once worshipped these people as gods, laying offerings of unimaginable wealth—and whatever else they asked for, it seems—at their feet. Now impoverished shareholders are choking on their own disgust. Stern moralists, such as William McDonough, president of the Federal Reserve Bank of New York, are urging restraint in the boardroom. Warren Buffett, the famous investor, chastises greed. Moreover, the cops have woken up, and some once-celebrated bosses are sure to go to jail.

Mr Welch once liked to brag about his supine board, as if it were yet more evidence of his abilities. Yet even boards now sense change is afoot. So do those sleeping giants, the big investing institutions which are meant to fight for shareholders. Cynics talk of market cycles and a return, soon enough, to the old ways. But this convulsion feels too powerful to permit the survival of the *ancien regime*. It is not ignoble and sanctimonious moral disgust that will seal its fate. Much more powerful is the pervasive sense of foolishness. Mr Welch, more than most, deserved to be well rewarded. But as he himself has come to realise, giving some back “sure feels right in my gut”.

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Bank of Japan

Shareholder of last resort

Sep 19th 2002 | TOKYO
From The Economist print edition

Japan's central bank steps in to support banks' share portfolios

Get article background

COULD this, at last, be an official admission that Japan's banks are on the brink? Many wonder what, besides deep and possibly imminent trouble, could have prompted the statement from Masaru Hayami, the governor of the Bank of Japan (BOJ), on September 18th, that it plans to buy shares directly from banks in a bid to stabilise the financial system.

By helping banks reduce their huge equity portfolios, already loaded with losses, the central bank says it hopes to shield them from further falls in an equity market which earlier this month hit a new 19-year low. Reducing such risks, which remain “a significant destabilising factor” for the banking system, it insisted, was an “urgent task”.

It was an unexpected about-face by a central bank which had, until almost the day before, stubbornly resisted pressure from ministers and politicians to prop up the stockmarket or bail out the banks. It was also a reversal of the BOJ's long-held view that buying equities is part of fiscal policy and therefore not in its mandate. (In fact, the central bank needed permission from the Ministry of Finance—permission that was immediately granted.)

Mr Hayami's bombshell, bursting just before the Tokyo Stock Exchange closed for the day, put the markets in a last-minute frenzy. The benchmark Nikkei 225, which had been falling steadily all day, shot up more than 200 points, to just short of 9,500. The rise was matched by equally swift falls in the bond and currency markets: investors feared that the move would damage the BOJ's fragile balance sheet, and that its volume of bond purchases might fall. The ten-year government-bond futures contract suffered its biggest daily fall in two years, while the yen dropped to a three-month low against the dollar.

After this excitement came questions—but few answers. The central bank merely said that it wanted to start buying shares as soon as possible, at market prices, and hold them for at least ten years. But how much does it want to buy? The big banks hold about ¥24 trillion ($200 billion) of equities; recent regulatory changes require them to reduce this to the level of their tier-1 capital, currently ¥17 trillion, by September 2004. The central bank may intend to take the balance off their hands. But the terms and conditions of the purchase are still being worked out.

Yasuhisa Shiozaki, a politician in the ruling Liberal Democratic Party (LDP), wonders why the BOJ would

use “a measure of last resort” when the role of ensuring that the banking system is sound lies primarily with the Financial Services Agency (FSA), the bank regulator. Others wonder whether the central bank, which has for years pushed the government (with little success) to speed up the disposal of the ¥150 trillion of bad debts in the banking system, is hoping to prod it into action. But that would require a big change of view at the FSA, which continues to insist that the banks are fine.

So far the central bank has not linked its planned bail-out to any quid pro quo from the government in the form of more fundamental reforms to clean up the banks. Yet surely, says Kohei Otsuka, a politician in the Democratic Party, if the Bank of Japan believes that the banking system is so weak that it requires such desperate measures, it should be pushing for broad, drastic solutions, including, perhaps, temporarily nationalising banks while they are being cleaned up.

The Bank risks losing credibility if its strategy backfires, warns Koyo Ozeki, a credit analyst at Merrill Lynch. By transferring risk assets, which by its own admission could fall in value in the coming months, it could take big losses itself. Furthermore, says Garry Evans, a strategist at HSBC Securities, the taboo of buying equities, once broken, could become a habit, reinforcing the belief that the authorities will always step in when the equity market falls to a certain level.

Worse, the BOJ's jealously-guarded independence is now in doubt. Many already believe it has bowed to political pressure. Such concerns could trigger further falls in the currency and government-bond markets, in turn creating big losses in the commercial banks' huge bond portfolios and eroding their capital—the very outcome that the BOJ set out to avoid.

The central bank is staking a great deal on a measure that may do little more than temporarily bolster the stockmarket. The BOJ insists that this is not part of the LDP's regular efforts to prop up the stockmarket before banks close their financial books at the end of March and September. Yet the plan is unlikely to provide any profits for banks to use to write off bad loans: they almost certainly bought most of these shares when prices were higher.

Why don't the banks simply sell their shares directly into the market, or to the special stock-buying entity recently set up by the government to help them unwind their cross-shareholdings (which the banks dislike because of the strict reserve requirements attached to them)? The only new twist offered by the latest plan is that it avoids putting downward pressure on the stockmarket—a sign, says Mr Evans, that the central bank has indeed been co-opted into the LDP's latest price-preserving operations.

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Asset-backed securities

Go with the flow

Sep 19th 2002 | NEW YORK
From The Economist print edition

Fall-out from financial scandal threatens a crucial debt market

THE collateral damage from America's campaign against corporate corruption is still spreading. A new source of concern is “The Employee Abuse Prevention Act of 2002”, a virtuous-sounding bill bouncing around Congress that could undermine the legal foundation of the trillion-dollar asset-backed securities market. Asset-backed finance, for all its flaws, plays a huge role in reducing the borrowing costs of American corporations, and of the average citizen too.

The most damaging changes sound well-intended and innocuous. Under the bill, sponsored by a consortium of Democrats led by Senator Dick Durbin of Illinois and Congressman Bill Delahunt of Massachusetts, the federal bankruptcy law would be tweaked to allow the court to “recharacterise” certain kinds of debt as well as the position of creditors. Typically, with asset-backed deals, companies promise to divert assets or cashflow from a part of their business (such as credit cards or car loans) into “special-purpose” entities—legally distinct companies that raise money through the sale of bonds. The bondholders receive the value of the securities at maturity on the basis of these designated cashflows, regardless of what happens to the parent company—and even if the transfer of assets eats into resources that are needed to fund pensions and maintain employment.

The purpose of the bill, says Mr Durbin, is to ensure that “the forgotten victims—employees and retirees—won't be asked to pay the price” of “an epidemic of corporate greed and corruption.” The best argument in favour of the Durbin-Delahunt position can be summarised in one word: Enron. The energy giant had an affection for these special vehicles and, allegedly, used them not only to disguise its true financial condition, but also to channel wealth to a small group of its executives.

But that should not disqualify the product altogether. Undermining the independence of special-purpose vehicles could raise the cost of borrowing for any business in the lower credit range—that is to say, much of corporate America.

Asset-backed borrowing first became popular in the early 20th century when even troubled railway companies found they could finance their rolling stock cheaply as long as the loans were secured on the wagons themselves. The same technique has allowed America's troubled car-rental firms to finance at the same rates as strong investment-grade companies. A decade ago, the asset-backed market covered only a handful of areas, primarily debt tied to homes, credit cards and cars. Moody's now rates securities backed by over 90 kinds of assets and cashflows, including mutual-fund commissions and tobacco-settlement payments.

But there have been glitches. Moody's has examined disasters during the past four years to illustrate that the early optimism about the market was vastly overblown. The asset-backed structure does poorly when the parent company is small, with no other sources of financing, and if it is involved in a fringe business, such as dodgy car loans or poor credit-card debt.

Then there is the reliability of a guarantee. A crucial failure occurred when AIG, a big insurance company, was perceived to have provided a guarantee for an asset-backed film deal, and then pulled out, precipitating the default of a highly-rated security. The market has since got wiser.

A change in the law is a bigger threat than corporate failure. If the special-purpose vehicle is not considered distinct from the parent company, its financing advantages will be lost. Before the Durbin-Delahunt bill, the biggest test came in December 2000, when LTV, a steel company, filed for bankruptcy and tried to retain money it received on inventory and receivables that it had already in effect sold to two special-purpose vehicles for $650m. The money was badly needed; nearly 20,000 jobs were at stake.

A local judge gave a preliminary ruling in LTV's favour. In response, a consortium of large banks, terrified of the impact of an adverse decision on the broader asset-backed market, arranged a complex bail-out that failed to save the company, but preserved the financing structure, at least for the moment.

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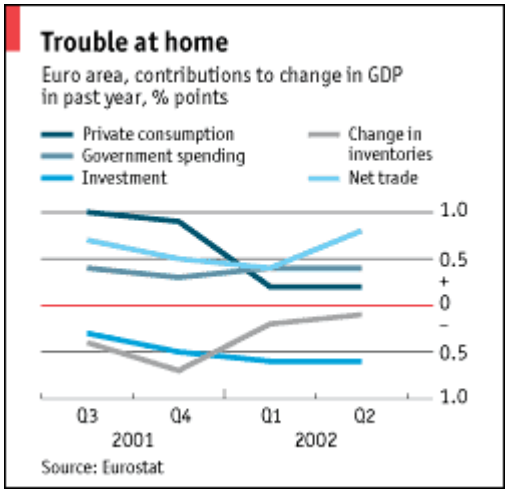
Euro-area economies

Catch 2002

Sep 19th 2002 | FRANKFURT
From The Economist print edition

As stockmarkets plunge, strains also show in the EU's stability pact



A FEW months ago, economists were forecasting steady recovery for the euro area. Oops. The zone's economy grew by only 0.4% in the first quarter and 0.3% in the second; the third is looking bad too. This week came news of a sharp fall in French industrial production in July and a rise in euro-zone inflation to 2.1% in August, above the goal of the European Central Bank (ECB). The bank, no softie anyway, is now less likely to cut interest rates. Europe's equity markets, already battered by global gloom, slumped. Germany's blue-chip Dax 30 index dropped 5% on September 18th, hitting a five-and-a-half-year low, and France's CAC 40 fell by 3.6%.

Slow growth has not only caught out the pundits: it is straining the euro-area's budgetary rules, the “stability and growth pact”. The idea of the pact is to prevent governments running loose fiscal policies at the expense of other euro-area countries. This could happen through higher interest rates if the ECB offset fiscal laxity with tighter monetary policy; or by a higher risk premium on euro-area government bonds.

The Maastricht treaty, which laid down the rules for euro membership, says that governments may not have budget deficits of more than 3% of GDP, except in a “severe economic downturn”, defined as a drop in GDP of more than 2% in a year, or when some other “unusual event” blights their finances. On top of this, governments are supposed to keep their budgets near to balance, allowing for cyclical fluctuations.

Four of the 12 euro-area governments—the three biggest, Germany, France and Italy, plus little Portugal—are off target. Earlier this year, they promised to bring their budgets “close to balance” by 2004. But the laggards are being pushed away from balance in 2004, not towards it, and they do not seem to care. Germany, in effect, is aiming for 2006. France's commitment to 2004 is conditional on economic growth of 3% in 2003, which looks out of reach. Moreover, its finance minister wants to cut taxes. So does Italy's. The Italian deficit, despite an official forecast of 1.1% for 2002, will probably be well over 2% both this year and next.

Letting the 2004 deadline slip makes sense. For a year or more, the euro area has been suffering from chronic weakness in domestic demand. Consumer spending is feeble in Germany and Italy; it is stronger in France, but could be weakened there by rising unemployment. Investment has also been frail: its weakness in the second quarter of this year cancelled out slightly perkier consumption. In effect, net exports have kept the euro economy going. Tighter fiscal policy may be the only way of hitting the 2004 target. Yet, with demand so weak, it is the last thing the euro area needs.

The sacred 3% limit for budget deficits, already burst by Portugal last year, will probably be breached by Germany this year. Weak economic growth could tip France over in 2003. Transgression can have dire consequences. The European Union's finance ministers are supposed to make recommendations intended to wipe out the excess deficit the year after its discovery. If the offending government does not comply, it has to lodge a deposit, at zero interest, of between 0.2% and 0.5% of GDP with the European Commission. If the sin is not corrected within two years, the deposit is converted to a fine.

Italy would like the pact to be eased. The French and German governments surely would too, though they are less vocal about it. The ECB, however, growls at any sign of weakness. Wim Duisenberg, its

president, said recently that “countries with remaining imbalances must avoid deficits in excess of 3% of GDP and implement determined policies in order to progress towards budgets close to balance or in surplus.”

David Walton, an economist at Goldman Sachs, says that the pact aims at the wrong thing. It makes no sense, he says, for all the euro area's governments to aim at budget balance no matter how much debt they carry. A rule intended to stabilise government debt at 60% of GDP, one of the Maastricht criteria for joining the euro, would allow most governments (but not Italy's, a big debtor) to run a small deficit most of the time and permit occasional deficits of more than 3%. Mr Walton thinks that this could be done without changing the treaty.

But would it help? Markets might see an easing of the pact, daft as it is, as a sign that ministers have no real interest in balancing their books. So delinquent countries would be punished either way.

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Asbestos litigation

Spreading out of control

Sep 19th 2002 | NEW YORK
From The Economist print edition

American asbestos litigation is in need of change

ABOUT 8,000 people claiming exposure to asbestos are suing 250 companies, including Mobil and Honeywell, in a trial starting in West Virginia on September 23rd. Many of these people are "unimpaired"—they show signs of asbestos exposure but are not actually sick. If a settlement is reached between the defendant companies and the plaintiffs, the unimpaired will be compensated (for their anxieties) as well as the critically ill. That would eat into the share of compensation going to the actual victims of asbestosis, a progressive scarring of the lung tissue that makes it hard to breathe, or of mesothelioma, a nasty form of lung cancer.

The unfairness of this is the chief argument used by companies defending themselves against mass litigation in asbestos lawsuits. There are some 200,000 asbestos claims currently pending in America, about a third of all those filed since the first lawsuit in 1966 in Beaumont, Texas. The legal system is clogged with them, but estimates for the final number of complaints range from 1.1m to 2.5m.

Today's claims are different from the first ones more than three decades ago. According to the RAND Institute for Civil Justice, a think-tank in California, about two-thirds of the claims are now filed by the unimpaired, while in the past they were filed by only the manifestly ill. And with most manufacturers of asbestos already bankrupt, the companies now taken to court are those that played a peripheral role, such as transporting the stuff or using minimal amounts in their products. Claimants among the "worried well" are lured by advertisements and by lawyers promising them money, says Steven Kazan, a lawyer who defends only the critically ill.

For insurance companies, another avalanche of multi-million-dollar claims from companies losing such cases could hardly come at a worse time. At the same time as their investment returns were plummeting last year, they had to cope with unusually high claims for natural catastrophes as well as the largest insured losses ever from the terrorist attacks of September 11th. But asbestos could yet result in bigger pay-outs than the combined losses from Hurricane Andrew, the costliest natural disaster to date, and the attacks on the World Trade Centre. Tillinghast-Towers Perrin, a consultancy, estimates that insurers will be stuck with about a third of the $200 billion final bill for asbestos. Last week, after a study by Tillinghast on the asbestos liabilities of Fireman's Fund Insurance, its parent, Allianz, added $750m to the company's asbestos reserves.

At the end of last year, Berkshire Hathaway added 30% more to its asbestos reserves of $6.3 billion and CNA Financial doubled its asbestos reserves to $1.2 billion. Some insurers try to settle quickly, once and for all, even at high cost. St Paul paid nearly $1 billion in June to settle a single asbestos claim by Western Asbestos. In May, a dozen insurers settled with PPG Industries, a chemicals and paint manufacturer with a half-share in an asbestos producer, for $2.7 billion to resolve all current and future claims.

At the same time, insurers are stepping up their campaign for new regulation and legislation to rein in asbestos claims. They would like to establish objective medical criteria for claimants, remove incentives to file claims without a manifest injury, ban consolidated claims, and bar attorneys from filing their claims in states that have no connection with the case. Evidence of asbestos injury, apart form mesothelioma and asbestosis, is heavily contestable. Shadows on x-rays could also be caused by smoking or pollution. "The reading of x-rays is very subjective," says James Foster at Everest Re. Individuals react differently to asbestos. Some women die of mesothelioma, because of having washed clothes exposed to asbestos, but an asbestos insulator in Montana is 85 today and still hiking in the mountains, says Gregory Munro at the University of Montana.

Insurers are lobbying to end consolidated claims (trying thousands of cases at once) and “forum-shopping”, whereby lawyers choose the most favourable jurisdiction. Tort law varies considerably from state to state. Only West Virginia and Mississippi allow litigation by very large numbers of claimants, as in the trial starting next week. Trial lawyers have been deluging courts in these two states. One county in Mississippi has 21,000 asbestos cases but only 9,700 inhabitants.

Insurers and a handful of trial lawyers, such as Mr Kazan, have united in a common cause: to get Congressional action to discourage the absurdities outlined above. But until now reform has repeatedly been blocked by the Association of Trial Lawyers of America, a powerful lobby that is one of the biggest donors to the Democratic Party and to law schools—deans of American law schools are hence not great fans of tort reform.

The majority of asbestos cases are settled out of court, points out Fred Baron, a lawyer at Baron & Budd, America's largest asbestos-law firm. But there are plenty of asbestos cases still coming to court—which is an inefficient use of resources. Litigation eats up 60% of the money spent on asbestos claims, says Philip Howard, a lawyer and a fierce critic of America's law-suit culture. He proposes taking asbestos claims away from the tort system by creating a federal scheme to compensate those who are really sick.

But who would pay? Federal schemes are expensive and create bureaucracy. Taxpayers are unlikely to applaud a bail-out of insurers and corporations, some of which were well aware of asbestos dangers at an early stage. The Senate Judiciary Committee will hold hearings to re-examine the issues surrounding asbestos liability on September 25th. But after 20 years of inaction, the chances that they will lead to effective change are small.

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Chapter 11

In trusts we trust

Sep 19th 2002 | NEW YORK
From The Economist print edition

Companies with large asbestos liabilities are seeking shelter in bankruptcy

BANKRUPTCY may not sound like an attractive option, but it is often the best alternative for firms in the throes of asbestos litigation. Ten asbestos-exposed firms have filed for bankruptcy so far this year, up from nine in 2001. Johns-Manville, a building-products firm that was one of the first asbestos-related bankruptcies when it filed for Chapter 11 protection in 1982, pioneered a process under which bankrupt firms segregate their asbestos liabilities in a trust. The trust absorbs all past and future asbestos responsibility, clearing the way for a clean reorganisation of the company.

In return, the trust receives monies for payments to asbestos claimants in the form of cash, stock, insurance policies and profit-sharing plans—the Manville Trust received 20% of Johns-Manville's consolidated profits until the firm was sold to Berkshire Hathaway in 2001. Trusts also have majority voting power in the new, cleaned-up firm. And companies receive a tax deduction on all payments that they make into the trust.

The Manville approach is catching on. Skyrocketing asbestos claims are pushing more and more companies into the red: National Gypsum, which filed for Chapter 11 in 1990, is establishing a Manville-like trust this year. Babcock & Wilcox, a bankrupt boilermaker, and PPG Industries, parent of the bankrupt Pittsburgh Corning, are doing the same.

But Manville is not a panacea: trusts only shift around the onus of asbestos liability. Since 1988, the Manville Trust has doled out $2.7 billion to approximately 443,000 claimants, but it still receives 8,000 to 10,000 new claims per month, according to Robert Falise, its managing trustee.

Babcock & Wilcox is hoping to change the dynamics of the game, in an effort to reduce the burden of claims. It is pursuing a strategy of sorting valid, scientifically-based claims from frivolous ones by having claimants fill in forms detailing their asbestos-related personal injuries, medical diagnosis and work record. More controversial still, the company is pushing for outside experts to address the scientific basis of asbestos claims in court. W.R. Grace and Federal Mogul, both bankrupted by asbestos liabilities, have filed briefs based on Babcock & Wilcox's approach.

Norfolk & Western Railroad is taking another slant. It challenged a $5.8m jury award granted to six healthy railroad workers who claimed emotional distress caused by fear that they might possibly develop cancer from past exposure to asbestos. In April, the Supreme Court agreed to hear the case, raising some hope that limits might be imposed on future claims.

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Fair disclosure

Share and share alike?

Sep 19th 2002
From The Economist print edition

In Britain, some shareholders are more equal than others

BRITISH punters may have thought that their stockmarket was based on the bedrock principles of fair play. They like the idea that all shareholders are treated equally. Yet, despite the fact that its rules forbid giving some shareholders more information than others, there have often been breaches in practice.

That is just the kind of thing America's Securities and Exchange Commission was aiming to stamp out when it created Regulation Fair Disclosure (FD) two years ago, with heaps of new laws to ensure proper disclosure of “material information”. But some in London are now wondering whether too much equality is a good thing. And they are finally working on changes that may end the wink-and-a-nod breaches that have plagued the principle in the past.

Of course, having the same information will hardly make shareholders equal. Some will take a keener interest in it than others. Most will have little means or motivation to keep a close eye on management. Even the big shareholders fall down on their watch. Which big money manager, for example, spotted Enron's or WorldCom's failings before they became public? Moreover, the easiest way for an investor to protest to management is not to sign up for the costly process of shareholder meetings and proxy votes, but simply to sell the shares of companies which are not quite up to scratch. For Britain's small investors, walking away from a company's shares is the best way to make their displeasure felt.

Nowadays, however, over half of Britain's equity markets are owned by institutional shareholders, such as pension funds and life insurers. Some of these institutions, responding to complaints of apathy in the face of corporate malfeasance, have strong ideas about how companies should be run and enough shares to make those ideas stick. They have been able to bend the ears of the chief executives, asking and receiving information that less important shareholders might not be able to hear.

Technically, however, such selective briefing can fall foul of the Financial Services Authority (FSA), with its strict insistence on a blunt principle of equality of information. The cost is likely to be a dumbing down of communication with the market. If managers cannot have a private chat with influential shareholders without also telling the whole street, company bosses are more likely to keep mum on big questions of strategy. Ken Rushton, Director of Listings at the FSA, says that under the current rules, lawyers are advising managers: “If in doubt, shut up”.

Even with America's detailed rules, its experience in the years since enacting Regulation FD shows how hard it is for financial regulators to spot a breach of the rules. FD was designed to prevent corporations from sharing key information with some analysts and investors, while keeping everyone else in the dark. It has encouraged managers to take advantage of such tools as webcasting open tele-conferences to reach widely scattered shareholders.

Yet for all its radical egalitarianism, Regulation FD has never been as draconian as it looks. In fact, it does allow for some exceptions: specifically, inside information can be shared with someone who keeps it to himself and does not use it to profit from share sales. Now the FSA is contemplating something similar, if only to keep up with practices which have long been acceptable among City analysts and big institutions.

The FSA's idea is to permit managers to invite chosen shareholders to take on the status of corporate “insiders”. As temporary insiders, these shareholders will be able to hear confidential information about strategy, and tell the managers just what they think. But there is a price for this forbidden knowledge and power: they forego the right to trade the company's shares for a while, until their inside information becomes public knowledge.

But will institutional investors accept the invitation to participate in corporate governance? Fat chance. Mr Rushton admits that it is not the institutional shareholders themselves who have sought to broaden the rules. Many investors would sooner cut off their ears than risk hearing anything that would restrict their freedom to trade. Walking, for British punters, may be rather cheaper than talking.

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Corruption in Lesotho

Small place, big wave

Sep 19th 2002 | JOHANNESBURG
From The Economist print edition

A conviction for bribery could have a wide impact

Pure source of corruption

TURN on a tap in Johannesburg: the crystal clear water that fills your glass has travelled some 300km from a dam in neighbouring Lesotho. The little mountain kingdom earns foreign currency exporting water from an $8 billion irrigation system: the Lesotho Highlands Water Project, one of the biggest constructions in Africa. But waves from the dam are spreading beyond Africa's shores. This week, a Canadian company which helped build the dam was convicted of paying bribes in a corruption case that could change the way big development deals are struck.

On September 17th, a Lesotho court found Acres International, a Toronto-based firm, guilty of passing $260,000 as a bribe to the chief executive of the project, Masupha Sole. In June, Mr Sole was convicted of 13 counts of bribery and of accepting more than $2m. He was told he would serve 18 years of a 57-year prison sentence. Even if an appeal by Acres fails, no member of the company will go to jail after sentencing in early October, but a hefty fine is likely. More threatening is the impact of the conviction on Acres's other building activities.

The company is involved in two more dams, in Uganda and Laos, which are expected to receive World Bank funding, and it has helped build enormous reservoirs such as the Three Gorges Dam in China. This week, an official at the World Bank said it had learned of the conviction of Acres and would “now determine whether further action by the Bank is warranted to exclude the company from future bids.” Since 1999, the Bank has promised to bar any company from development projects if it is found to be involved in corruption. Over 70 companies and individuals have been excluded so far. A Bank committee which conducted a two-year investigation into Acres International, but found no evidence of wrongdoing, is expected to reopen its case soon.

Legal proceedings are also underway in Lesotho against some of Europe's biggest building companies, which were also involved in the consortium that built the dam: Lahmeyer International of Germany, Britain's Balfour Beatty and France's Spie Batignolles and Dumez International. Anti-sleaze and anti-dam activists demanded this week that the Bank crack down on corruption by barring all these companies from other lucrative contracts if they are convicted.

The World Bank is also under pressure to make big aid projects more effective and less corruption-prone. Last December, its own Operations Evaluation Department said that the institution's activity in Lesotho had been “moderately unsatisfactory”—harsh words indeed from an internal report—and suggested that the Bank avoid big building projects and focus instead on poverty alleviation, education and health.

On September 18th, the African Union said it too would ratchet up efforts against graft, which it guesses costs the continent nearly $150 billion a year by increasing the price of goods. While officials are often to blame, the Lesotho government hopes the new conviction will change the image of African governments as being hopelessly corrupt. Guido Penzhorn, an advocate who led the government team, argues that the case is important because it highlights the damaging role of those who offer bribes: “This turns on its head the perception in first-world countries that consultants are obliged to pay bribes in Africa. It was the company that offered money; it is very important that the briber was convicted. People here are very aggrieved when the rich world writes this off as just an African problem.”

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Economics focus

Treading lightly

Sep 19th 2002
From The Economist print edition

Does mankind need more than one planet?

IN THE discussions surrounding last month's United Nations World Summit on Sustainable Development, a particular measure of environmental stress was often cited—mankind's "ecological footprint". The idea is to translate human demands on the environment into a common unit, so they can be added up. The footprint is the physical area required to meet man's needs and wants. This can be compared with the productive area available, to give a sense of how sustainable those needs and wants may be.

In its *Living Planet Report 2002**, WWF, a conservation group, says that mankind's ecological footprint is already 1.2 Earths. "Humans are currently running a huge deficit...using over 20% more natural resources each year than can be regenerated, and this figure is growing each year." The group predicts that by 2050 "humans will consume between 180% and 220% of Earth's biological capacity."

Running this enormous "overdraft" with the planet is going to have bad consequences, the group says. "Unless governments take urgent action, by 2030, human welfare, as measured by average life expectancy, educational level and world economic product will go into decline." The *Observer*, a British newspaper, summed it all up neatly in a headline: "Wanted: New Earth by 2050".

Are these extraordinarily pessimistic forecasts at all plausible? No, says an analysis by Denmark's Environmental Assessment Institute, headed by Bjorn Lomborg, author of "The Skeptical Environmentalist". Two main things are wrong with WWF's approach. First, the footprint is a difficult measure to make sense of. Second, even if assorted environmental pressures could be aggregated in the way footprinters advocate, WWF's predictions would still look mysteriously gloomy.

In principle, there is nothing wrong with trying to come up with a common unit of environmental pressure, provided the simplification is useful rather than misleading. The footprint idea combines the area required for cropland, grazing land, forest products, fishing grounds, sustainable use of energy, and built-up land (making adjustments for the productivity of different sorts of space). In 1999, according to WWF, the total came to 13.7 billion hectares. But the group says that only about a quarter of the planet's surface, 11.4 billion hectares, is available to supply these services—hence the overdraft.

No room, no room

Why is this misleading? To begin with, the institute points out, the approach builds in questionable assumptions. Crucial is an implicit, and very strict, idea of sustainability, which in effect denies that natural resources can often be replaced or augmented by man-made ones.

This aside, the main drawback of the analysis is the way it treats energy. WWF defines the footprint for fossil fuels as the area of forest required to absorb emissions of CO_2 (excluding those absorbed by the oceans). Growth in the energy footprint then drives almost everything else. The energy footprint increased from 2.5 billion hectares in 1961 to 6.7 billion in 1999, the fastest-growing component of the overall footprint—and, by the end of the period, very much the biggest.

Exclude energy from the total footprint, and it is harder to get alarmed. Growth in the ecological footprint excluding energy was much smaller than growth in global population between 1960 and 2000: that is, the ecological footprint per person, excluding energy, has been shrinking rapidly. Hardly a sign of reckless unsustainability.

So a lot turns on whether it is right to include the energy footprint in the aggregate measure—and on whether it is right to estimate this as the forest area required to absorb CO_2. On the first question, it is not obvious why sustainable development should require no change whatever in CO_2 concentrations, as the energy footprint implicitly demands. And even if sustainability did require this, there would be other ways of doing it—such as by increasing the use of renewable sources. Some renewable sources (such as windmills in deserts) make no demands on biologically productive space, which incidentally implies that the limit of 11.4 billion hectares for the area available to provide environmental services is wrong.

Framing the right policy on energy and CO_2 is complicated, to be sure. The point is, the footprint approach muddles the issue rather than simplifying it, apparently for the sake of yielding an alarming overall ecological deficit.

However, supposing everything WWF says about footprints is correct, how does the group come up with the catastrophe they have pencilled in for 2030? Between then and 2060 their projections appear to show average life expectancy across the world falling to less than 25 years. (The United Nations population division predicts that life expectancy will rise to nearly 80 years by 2060.) *Living Planet Report 2002* does not say how this cataclysm comes about. The underlying analysis has not yet been published, and Mr Lomborg's institute is at a loss. The answer cannot be global warming. By 2030, according to the Intergovernmental Panel on Climate Change, global warming will have added at worst one degree to global temperatures. How could this cause the global catastrophe WWF says it fears?

WWF is using an updated version of the model which the Club of Rome used in the 1970s to predict, among other things, that the world would run out of oil by 1992. Maybe that explains it.

Living Planet Report 2002 is available on WWF's website, www.panda.org. The Environmental Assessment Institute's paper can be found at www.imv.dk

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The Antikythera mechanism

The clockwork computer

Sep 19th 2002
From The Economist print edition

An ancient piece of clockwork shows the deep roots of modern technology

WHEN a Greek sponge diver called Elias Stadiatos discovered the wreck of a cargo ship off the tiny island of Antikythera in 1900, it was the statues lying on the seabed that made the greatest impression on him. He returned to the surface, removed his helmet, and gabbled that he had found a heap of dead, naked women. The ship's cargo of luxury goods also included jewellery, pottery, fine furniture, wine and bronzes dating back to the first century BC. But the most important finds proved to be a few green, corroded lumps—the last remnants of an elaborate mechanical device.

The Antikythera mechanism, as it is now known, was originally housed in a wooden box about the size of a shoebox, with dials on the outside and a complex assembly of bronze gear wheels within. X-ray photographs of the fragments, in which around 30 separate gears can be distinguished, led the late Derek Price, a science historian at Yale University, to conclude that the device was an astronomical computer capable of predicting the positions of the sun and moon in the zodiac on any given date. A new analysis, though, suggests that the device was cleverer than Price thought, and reinforces the evidence for his theory of an ancient Greek tradition of complex mechanical technology.

Michael Wright, the curator of mechanical engineering at the Science Museum in London, has based his new analysis on detailed X-rays of the mechanism using a technique called linear tomography. This involves moving an X-ray source, the film and the object being investigated relative to one another, so that only features in a particular plane come into focus. Analysis of the resulting images, carried out in conjunction with Allan Bromley, a computer scientist at Sydney University, found the exact position of each gear, and suggested that Price was wrong in several respects.

In some cases, says Mr Wright, Price seems to have “massaged” the number of teeth on particular gears (most of which are, admittedly, incomplete) in order to arrive at significant astronomical ratios. Price's account also, he says, displays internal contradictions, selective use of evidence and unwarranted speculation. In particular, it postulates an elaborate reversal mechanism to get some gears to turn in the right direction.

Since so little of the mechanism survives, some guesswork is unavoidable. But Mr Wright noticed a fixed boss at the centre of the mechanism's main wheel. To his instrument-maker's eye, this was suggestive of a fixed central gear around which other moving gears could rotate. This does away with the need for Price's reversal mechanism and leads to the idea that the device was specifically designed to model a particular form of “epicyclic” motion.

The Greeks believed in an earth-centric universe and accounted for celestial bodies' motions using elaborate models based on epicycles, in which each body describes a circle (the epicycle) around a point that itself moves in a circle around the earth. Mr Wright found evidence that the Antikythera mechanism would have been able to reproduce the motions of the sun and moon accurately, using an epicyclic model devised by Hipparchus, and of the planets Mercury and Venus, using an epicyclic model derived by Apollonius of Perga. (These models, which predate the mechanism, were subsequently incorporated into the work of Claudius Ptolemy in the second century AD.)

A device that just modelled the motions of the sun, moon, Mercury and Venus does not make much

sense. But if an upper layer of mechanism had been built, and lost, these extra gears could have modelled the motions of the three other planets known at the time—Mars, Jupiter and Saturn. In other words, the device may have been able to predict the positions of the known celestial bodies for any given date with a respectable degree of accuracy, using bronze pointers on a circular dial with the constellations of the zodiac running round its edge.

Mr Wright devised a putative model in which the mechanisms for each celestial body stack up like layers in a sandwich, and started building it in his workshop. The completed reconstruction, details of which appeared in an article in the *Horological Journal* in May, went on display this week at Technopolis, a museum in Athens. By winding a knob on the side, celestial bodies can be made to advance and retreat so that their positions on any chosen date can be determined. Mr Wright says his device could have been built using ancient tools because the ancient Greeks had saws whose teeth were cut using v-shaped files—a task that is similar to the cutting of teeth on a gear wheel. He has even made several examples by hand.

How closely this reconstruction matches up to the original will never be known. The purpose of two dials on the back of the device is still unclear, although one may indicate the year. Nor is the device's purpose obvious: it may have been an astrological computer, used to speed up the casting of horoscopes, though it might just as easily have been a luxury plaything. But Mr Wright is convinced that his epicyclic interpretation is correct, and that the original device modelled the entire known solar system.

The Greeks had a word for it

That tallies with ancient sources that refer to such devices. Cicero, writing in the first century BC, mentions an instrument “recently constructed by our friend Poseidonius, which at each revolution reproduces the same motions of the sun, the moon and the five planets.” Archimedes is also said to have made a small planetarium, and two such devices were said to have been rescued from Syracuse when it fell in 212BC. This reconstruction suggests such references can now be taken literally.

It also provides strong support for Price's theory. He believed that the mechanism was strongly suggestive of an ancient Greek tradition of complex mechanical technology which, transmitted via the Arab world, formed the basis of European clockmaking techniques. This fits with another, smaller device that was acquired in 1983 by the Science Museum, which models the motions of the sun and moon. Dating from the sixth century AD, it provides a previously missing link between the Antikythera mechanism and later Islamic calendar computers, such as the 13th century example at the Museum of the History of Science in Oxford. That device, in turn, uses techniques described in a manuscript written by al-Biruni, an Arab astronomer, around 1000AD.

The origins of much modern technology, from railway engines to robots, can be traced back to the elaborate mechanical toys, or automata, that flourished in the 18th century. Those toys, in turn, grew out of the craft of clockmaking. And that craft, like so many other aspects of the modern world, seems to have roots that can be traced right back to ancient Greece.

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GM crops in Africa

Better dead than GM-fed?

Sep 19th 2002
From The Economist print edition

Europe's greens are helping to keep Africans hungry

Get article background

Reuters

Food before fine words

SOUTHERN AFRICA'S food crisis is set to be the worst in a decade. Around 14.5m people are dangerously hungry, and many have been reduced to eating wild leaves and pig food. One might, then, expect food aid to be welcomed. But Zambia is refusing to accept American donations because much of its corn and soya is genetically modified (GM). Zambia's president, Levy Mwanawasa, calls the stuff “poison” and refuses to import it, despite a warning from the UN World Food Programme, on September 16th, that relief supplies in his country could run out in two weeks.

Africans have two reasons for being wary of GM food aid: one silly, one slightly less so. The silly reason is the suggestion that GM foods are a danger to human health. Americans have been chomping GM maize and soyabeans for seven years, without detectable harm. And compared with the clear and immediate danger posed by malnutrition, the possibility of being poisoned by Frankencorn seems rather remote.

The more sensible reason for being wary of GM foods is that there are people who, not being in any danger of starvation, are precious about what they eat. They are called Europeans. And their tastes matter enormously in Africa because countries such as Zambia earn much of their hard currency from agricultural exports to rich countries, so any plausible threat to this trade has to be taken extremely seriously.

GM food aid is such a threat because if a Zambian peasant were to plant GM seeds from an aid shipment, these might pollinate (or, as Greenpeace puts it, “contaminate”) neighbouring fields. Before long, farmers might no longer be able to convince European buyers that their products were GM-free—making them harder to sell.

While imports of GM food are not barred from Europe by law, consumers are so suspicious of them that supermarkets have constructed elaborate systems to certify that the food they sell is unmodified. Tesco, for example, a British supermarket, promises that there are no GM products in its own-brand food. It audits its suppliers to make sure they comply, and has samples of foods tested for traces of DNA that would indicate that some of the ingredients have been genetically modified.

The laboratory tests for GM ingredients do not work by screening for genetic modification *per se*, but look for already known pieces of DNA or protein that reveal the presence of recognised GM foods. In other words, the tests look for GM foods that have been registered and approved by at least one country's food-safety authorities. New and unknown GM ingredients wouldn't show up, says Neil Griffiths, head of Law Laboratories in Birmingham, England, a firm involved in the testing business. Testing is also difficult in highly processed foods. Oil derived from GM soyabeans, for example, cannot be tested as it often contains no DNA or protein.

While the testing regime is flawed, it is stringent enough to present a serious problem for farmers in poor countries who want to export their crops. The fears of pampered northerners are thus creating an obstacle to the acceptance of food aid and the adoption of technology that might make the poor less poor.

Other hungry countries in the region, such as Zimbabwe and Mozambique, have decided, despite initial reluctance, to accept GM food aid. In Zimbabwe, the government decided to tackle the problem of “contamination” by milling aid corn before distributing it, so that it cannot be replanted. (There are, though, concerns that seeds could still be stolen before the government is able to mill them.) Zambia may yet follow its neighbours' example; local scientists have been sent to Europe, America and South Africa to study the pros and cons of GM, and will report back shortly.

Europe's anti-GM hysteria, however, will continue to deter farmers in poor countries (the majority of the population) from planting crops which tend to have higher yields and require fewer applications of costly and dangerous chemical pesticides. Hardly a green outcome.

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Satellite launchers

The new jet set

Sep 19th 2002
From The Economist print edition

Researchers are vying to build a system that will launch small satellites cheaply

IN SPACE, small is not yet beautiful. Even as engineers manage ever more miraculous feats of miniaturisation on the ground, the route to the skies remains dominated by massive rocket launchers spawned by manned space programmes. Satellite small fry (those weighing less than 100kg) can, if they are lucky, piggyback on such launches. But that may mean waiting years to hitch a ride into space.

The lack of a cheap and flexible means of launching small satellites has been a problem for a long time. Now, military necessity may lead to a solution. America's armed forces want to launch small tactical satellites, such as spy satellites, on demand—for example, in response to the outbreak of a regional conflict. So, teams from six American firms are competing to design a jet aircraft that would fly to the edge of space and then launch a small satellite into an orbit low enough for spying, using an expendable two-stage rocket.

The project, known as RASCAL (Responsive Access, Small Cargo and Affordable Launch), is sponsored by America's Defence Advanced Research Projects Agency. The agency wants a vehicle that will put satellites weighing less than 75kg into orbit for about $10,000 per kilo. Although this is no cheaper per kilo than launching large satellites, it is less than a fifth of the cost of using existing launchers specifically to put up small payloads. Moreover, employing a jet aircraft as a reusable initial stage for launching a satellite has another advantage—an aircraft could take off discreetly from any military airfield, and then make a secret satellite launch from anywhere within range.

The idea is that the jet would fly subsonically to an altitude of about 15km. It would then begin a supersonic-boost manoeuvre, shooting the aircraft on a ballistic trajectory out of the atmosphere. Once beyond the air, the craft would coast with its engines switched off. At the peak of its trajectory the doors of its satellite bay would open and the payload would be released, to be carried the rest of the way into orbit by a rocket. The aircraft would then fall back towards the earth, restarting its motors when the air was thick enough to support combustion, and fly home.

One of the key pieces of technology needed for the aircraft is a special booster for its engines. This is called a Mass Injected Pre-Compressor Cooled (MIPCC) system, and it works by injecting a fine mist of water into the air ahead of the engines. That does two things. It cools the engines' compressors, stopping them from overheating as the plane goes faster. And it makes the air denser, which increases the thrust of the engines. This should allow the jet to travel farther and faster in the thin atmosphere of high altitude than would be possible for an aircraft powered by unassisted jet engines. Even that, however, will not be enough to take the craft out of the atmosphere altogether. At an altitude of 30km the MIPCC system must inject liquid oxygen into the engines to maintain thrust.

This is not the first time that rockets will be launched from jet aircraft. Many decades ago the American air force tested a similar idea as part of a programme to develop anti-satellite technology, but nothing came of it. And Orbital Sciences, a commercial satellite-launching firm based in Dulles, Virginia, has been launching Pegasus rockets from a modified B-52 bomber for over a decade. But Pegasus is a three-stage device designed for much larger satellites than RASCAL's jet will carry. More significantly, RASCAL's craft will be unique because it will leave the atmosphere.

In December, the six competing teams will be narrowed down to one, or possibly two. The winner, or winners, will be awarded $10m to refine their designs and test hardware. By 2006, a demonstration vehicle costing $88m is planned. If a suitable design can be found, it might, besides offering military advantages, lead to the development of a low-cost way to launch small commercial satellites. Then anyone could have an eye in the sky.

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Out-of-body experiences

Transcendental medicine

Sep 19th 2002
From The Economist print edition

Out-of-body experiences come from stimulating one part of the brain

AMERICAN football is often described as a game of inches. Neuroscience is much the same. Forward progress is difficult, and each stride small. And though the basic anatomy of the brain is known, it is not always clear what role each little part plays. Now neuroscientists think they may have pinned down the source of out-of-body experiences, phenomena that have long confounded scientists and delighted occultists.

While probing the brain of a woman who suffered from epilepsy, Olaf Blanke and his colleagues at the University Hospital of Geneva found that stimulating the right angular gyrus (a point about an inch above and slightly behind the right ear, and just inside the skull) caused her to feel that she was travelling out of her own body. In a treatment undertaken after more than ten years of drug therapy had failed, around 100 electrodes were implanted in the woman's brain. Over the course of a week, the electrodes were monitored to find the source of electric currents in the brain responsible for the seizures. For around 90 minutes each day, the electrodes were also stimulated to map the structure of the brain so as to identify language centres and other vulnerable areas.

When the current was first applied to the right angular gyrus, the woman reported that she was sinking into the bed, as if falling from a height. As he reports in *Nature* this week, Dr Blanke then systematically applied additional electric currents to the woman's right angular gyrus. When she looked at her legs during the stimulation, she saw them grow shorter. Similarly, her left arm felt as if it was shrinking. But when her eyes were averted, the stimulation led to her apparently seeing herself lying in bed, from about two metres above it.

Though he stresses that the mechanisms involved are not fully understood, Dr Blanke supposes that such an out-of-body experience is caused when inputs from the “body schema”—the system that gives one a sense of one's own body—get out of synch with those from the vestibular system, which is responsible for balance. By deliberately disrupting this synchronisation, Dr Blanke can induce such experiences. This serendipitous discovery accompanies another pleasing result for the team in Geneva: after the removal of a small section of her brain identified by the study, the epilepsy patient is now back at work, almost fully cured of her seizures.

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About sponsorship

Eric Hobsbawm

Giving account

Sep 19th 2002
From The Economist print edition

You can be wrong in politics without being a fool or a scoundrel

THIS autobiography, says Eric Hobsbawm, does not take the form of a post-mortem in which the corpse pretends to be the coroner. Fortunately for his readers, he is wrong. Inquest is in fact the best succinct description of "Interesting Times", a ruthlessly honest self-investigative book in which this eminent Marxist historian, born in the year of the October revolution of 1917, tries his best to understand and to explain why he is "a lifelong communist".

Interesting Times: A Twentieth-Century Life
By Eric Hobsbawm

Penguin/Allen Lane; 448 pages; £20. To be published in America by Pantheon in August 2003

Buy it at
Amazon.co.uk

The gentle mockery in the "lifelong" label is deliberate. Mr Hobsbawm knows that the communism that inspired his generation at Cambridge in the 1930s, "the reddest and most radical generation in the history of the university", has predeceased him. "We thought we knew what the new world would be like after the old world had come to an end. In this, like all generations, we were mistaken."

No apologies, he thinks, are called for, and none is made. It was as a schoolboy in Berlin when Hitler came to power that the young Hobsbawm first became attracted to communism and he still believes it was the right response at that time and in that place. Nazi Germany was a monstrous evil and only Communist Russia could destroy it. Virtual history is all very well but, even now, "if you ask me to entertain the proposition that the defeat of National Socialism was not worth the 50m dead and the uncounted horrors of the second world war, I simply could not." He nonetheless concedes here, as he conceded in "Age of Extremes" (1994), his history of what he called the short 20th century, that communism was not just distorted but perverted when, under and after Stalin, the state interests of the USSR prevailed over the world revolutionary interests of the Communist International.

The universalism of the communist ideal still moves him. His father was an English Jew and his mother an Austrian one. They married in Switzerland. He was born in Alexandria in Egypt, and went to school in Vienna and Berlin. As a child of *Mitteleuropa*, with his background in the multilingual and multiconfessional Habsburg empire, he detests the nationalism of blood and soil everywhere. The behaviour of Israel's Likud Party, whose founders, he writes, were inspired by Mussolini, often tests the vow he made to his mother never to be ashamed of his Jewishness.

As well as cosmopolitan comrades, the certainty of eventual victory and the aesthetic appeal of a perfect and comprehensive intellectual system, his years as a communist activist also provided him with the experience of fraternity—an experience reinforced by his war-time service. Confined to menial roles by the suspicions the brasshats held about his loyalties, he worked alongside the workers of hand, whom he came to admire as well as like. Perhaps in consequence, Mr Hobsbawm is not an intellectual or any other sort of snob.

With a wry grin he recalls speeches at Marxist conferences so boring they pushed delegates into the streets, and a Communist International journal which, "even by the

exacting standards of the Soviet era, must have been the all-time champion of unreadability". Yet he remains such an intensely partisan animal that he will automatically support any football team playing a country, like Croatia, that had a nasty right-wing past. Characteristically, the political overwhelms the personal in his autobiography. He is, as he says, a historian, not a gossip-columnist, and has no interest in lifting the sheets. His ever-sociable wife, Marlene, makes a few cameo appearances, but his children and grandchildren hardly get a mention.

Sadly, you only glimpse his enthusiasms. In his mid-80s, Mr Hobsbawm remains curious about everything, from the poems of Kipling which he imbibed as a boy to the birdsong of blackbirds to the incomes of hill farmers of rural Wales, a place that he has come to love. The great recreational passion of his life is jazz and it takes up a sizeable chunk of "Interesting Times". Typically for him, it has a political dimension. It was through jazz that he threw himself into an early anti-racist campaign after race riots in Notting Hill in the late 1950s. As his party faith had seriously weakened when Russian tanks crushed the Hungarian uprising in 1956, he did not try hard to turn that pro-immigrant campaign into a communist front.

Interesting Times: A Twentieth-Century Life.
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18th-century science

Before there were departments

Sep 19th 2002
From The Economist print edition

IN THE middle decades of the 18th century a group of clever, merry, Birmingham men gathered every month on the Monday night nearest to the full moon to discuss pretty much everything under the sun. There was Erasmus Darwin, an enormously fat doctor, Matthew Boulton, a pushy metal-goods manufacturer, and Josiah Wedgwood, the man who turned fine pottery into a commercial goldmine. They were joined on occasions by James Watt, the engineer who fine-tuned the steam engine, and Joseph Priestley, a burning radical who discovered oxygen.

As these brief resumés suggest, the members of the Lunar Society were men of huge and varied talents. In an age before intellectual specialisation, it was not uncommon for a factory owner to read philosophy or for a doctor to play the flute beautifully. However, at the heart of the Lunar men's interests lay a driving curiosity in the workings of the natural world (fittingly, they had chosen the full moon to meet because it gave the most light as they stumbled home, drunk on fine ideas and clever talk). Together and separately, Darwin, Wedgwood and their friends classified fossils, made telescopes, created sparks of electricity, and came up with scores of ingenious suggestions for the world's improvement (this included towing icebergs from the Arctic to the equator to even out the climate).

The Lunar Men: Five Friends Whose Curiosity Changed the World
By Jenny Uglow

Farrar, Straus and Giroux; 512 pages; $30.
Faber and Faber; £25

Buy it at
Amazon.com
Amazon.co.uk

Jenny Uglow has done that difficult thing of writing a group biography that gives equal attention to all the main players, yet still manages to be something more than a patchwork. With her sure grasp of the social and political passions driving the times, she is able to situate her clutch of subjects in a very particular intellectual tradition. Most of the Lunar men were from non-conformist backgrounds and so not part of an Oxbridge-educated elite. Either they went to Scotland to be taught, or else they learned at their father's workbench, picking up practical scraps that, combined with evening study, cohered into a system of proper knowledge. All of them, as might be expected, were restless, questioning, convinced that there were new and better ways of doing things—whether that involved writing a poem on the sex lives of plants or building a canal. With pardonable exaggeration, Ms Uglow in her introduction credits the Lunar men with nothing less than inventing the modern world.

Scientific experimentation in these times was a risky business, full of sudden bangs, sour smells and unexpected textures, and the author is marvellously good at capturing this sensuous world, far removed from white coat sterility. Where she also scores highly is in her deft way of linking this narrative of exploration and achievement with a more hidden, ambling story of love affairs, humdrum marriages, disappointing children and exhausted endings. The result is an absolute wonder of a book, huge in its span and close in its detail, nothing less than a snapshot of what and who was best about Britain and its intellectual life in the middle of the 18th century.

The Lunar Men: Five Friends Whose Curiosity Changed the World.
By Jenny Uglow.
Farrar, Straus and Giroux; 512 pages; $30.
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Human nature

Who's afraid of the new science?

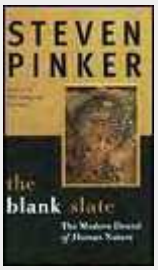
Sep 19th 2002
From The Economist print edition

AT A film your bliss is disturbed by the chatter of small children. What is it, you wonder, about dark rooms and bright screens that loosens little kids' tongues? Then their parents start rabbiting away over the popcorn, and the answer becomes obvious: they taught their spawn to act this way. But hold it, say behavioural geneticists. What if the children inherited a gabby disposition straight from the parents in their cocktail of genes? Learning could well have had nothing to do with it.

Steven Pinker's provocative new book is full of catchy examples like this that he uses to highlight two radically different ways of conceptualising and explaining our behaviour: one with an eye to culture, learning and the social sciences, the other with an eye to nature, genetic inheritance and experiment. He makes no bones about where he stands. Social science and its popularisers have, he thinks, systematically ignored or derided recent strides by neuroscience, artificial intelligence, behavioural genetics and evolutionary psychology. Though he seems to have a point to score or a joke to crack about almost every topic on earth, he makes his main argument persuasively and with great verve.

This is territory where dust soon flies and tempers are quickly lost: remember Richard Dawkins and Stephen Jay Gould? Luckily, Mr Pinker rarely loses his cool. “The Blank Slate” ought to be read by anybody who feels they have had enough of nature-nurture rows or who thinks they already know where they stand on the science wars. It could change their minds.

The Blank Slate: The Modern Denial of Human Nature
By Steven Pinker



Viking Press; 528 pages; $27.95.
Penguin/Allen Lane; £25

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If nothing else, Mr Pinker's book is a wonderfully readable taster of new research, much of it ingenious, designed to show that many more of our emotional biases and mental aptitudes than previously thought are hard-wired or, to use the old word, innate. Further, because humans are genetically speaking a fairly homogeneous species, people the world over are more alike in deep ways that matter than may appear from superficial differences of culture. The book ends with a startling list of more than 300 so-called human universals published originally by Donald Brown in 1991 including not only the presence everywhere of childbirth rites, incest taboos and beliefs about death—we expect that—but, more surprisingly, the existence in all societies of, for example, repertories of facial expression for a few basic emotions that do not themselves vary from culture to culture.

Confusingly, Mr Pinker gives two reasons why people resist this new science, one more convincing than the other. His weaker explanation is the alleged appeal of three myths: the blank slate, the noble savage and the ghost in the machine. Nobody could consistently hold all three at once, and only the blank slate—an idea famously expressed by John Locke in the 17th century when he called a newborn's mind “white paper devoid of all characters”—is really relevant. Mr Pinker brings in the noble savage—belief in the gentleness of primitive man—and the ghost in the machine—reluctance to abandon an immaterial mind or soul—largely for the polemical fun of torching a few straw men.

The idea of a blank slate came to underpin 20th-century behaviourism, typified by B.F. Skinner, for whom human beings were little more than conditioned automata. It was a working hypothesis of sociology and anthropology that looked for the basis of our beliefs and attitudes in teaching and social practice, not in the contents of the fledgling brain. Blank-slatism reached its nadir, in Mr Pinker's view, in the post-modernist claim that all human attitudes and categories of thought—even gender—are a social construction.

Beyond the two camps

At this point, it would have been neater for a two-camps approach if hard science, as Mr Pinker calls it, were united against the rogues and cretins of cultural relativism in rejecting the blank slate. But, ever honest, he admits that the blank slate still has defenders among tough-minded and experimental researchers: in artificial intelligence, “connectionists” who think brains work like neural networks simulated on computers “learning” from statistical patterns with only weak constraints on their inner structure (the near-blank slate); and in neuroscience, defenders of neural plasticity: the view roughly that the brain is a flexible and general-purpose learning device rather than a pre-packed box of specialised tools determined by our genes (the rewritable slate). If truth be told, blank-slate empiricism is still the basis in many experimental psychology departments where the innatism Mr Pinker champions is treated as a dodgy bet.

So if the noble savage and the ghost in the machine are irrelevant, and if even “hard” science disagrees about the blank slate, what is hostility to the new research due to? Fear—Mr Pinker's second answer—is altogether more convincing.

One fear is of inequality. If science shows that our inborn endowments are unequal, will that not legitimise unequal treatment? Another fear is of imperfectibility. If science shows we are less changeable than hoped, will schools and social improvement be pointless? If parental example, as opposed to genes and luck, has little effect on how children turn out, will that encourage indifference and neglect? No, Mr Pinker says, these fears confuse findings of fact with social aims and human values. In sum, he is saying, the new science of man will probably leave most of our moral and political arguments at the starting gate. Not everyone will be so sanguine. But Mr Pinker's approach does show how little of the new research can be squeezed into left-right or liberal-conservative boxes. This is a breath of air for a topic that has been politicised for too long.

Two final points in favour of “The Blank Slate” are these. Unlike many new-science popularisers, the book never underplays the mind's complexity. Nor does it revel in juvenile smugness about the human condition. In one of his best chapters, “The Many Roots of Our Suffering”, Mr Pinker suggests that conflict between the drives which evolution has landed us with and the aptitudes that would now help us prosper is probably inevitable. Scientific knowledge can at least aid us in managing this conflict, and denying science will almost certainly make it worse. In the words of Anton Chekhov, one of Mr Pinker's favourites, “Man will become better when you show him what he is like.”

The Blank Slate: The Modern Denial of Human Nature.
By Steven Pinker.
Viking Press; 528 pages; $27.95.
Penguin/Allen Lane; £25

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About sponsorship

New fiction

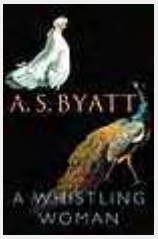
We'll think of something

Sep 19th 2002
From The Economist print edition

“THIS isn't the end,” expostulates Leo, Frederica's small son, as the serial story being read to him comes to a final stop. You feel the same about “A Whistling Woman”, the last in A.S. Byatt's magnificent quartet of novels on intellectual life and thought in the 1950s and 1960s. But 1970 has been reached, a scattering of the characters on her huge canvas have been killed off, or paired off, and it is time to stop.

“A Whistling Woman” can be read on its own. Rich in metaphor and glancing allusion, it is a tale of learning and anti-learning, sects and cults, the complex sexual relationships of humans and snails. The snails, the pursuit of two scientists, get locked away behind the fence of a self-destructive community led by a charismatic blood-haunted Manichee. The minor humans, a fairground of oddities, are named with Dickensian ear: Elvet Gander, a creepy psychoanalyst, Avram Snitkin, an itinerant ethnomethodologist, Mickey Impey, a pretty pop poet, Jonty Surtees, an agitator, Eva Wijnnobel, a terrible astrologer.

A Whistling Woman
By A. S. Byatt



Chatto & Windus; 436 pages; £16.99. To be published in America by Knopf in December

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A knowledge of the earlier books does, however, help. Some characters must seem two-dimensional without knowing, beyond a brief recap, what has made them as they are: guilt-ridden, for instance, or melancholic. Frederica, for one, will suffer from reading the new book only. Born (like her author) in 1936, her life threads through all four volumes. Clever, thin, pushy Frederica reaches for the sky, and keeps falling. A natural academic, possibly creative (though her only book sounds a ghastly 1960s contraption), she ends up a mini-celebrity on a TV chat-show, feeling, in her words, “a mermaid in a raree-show”.

But “A Whistling Woman”, like its predecessors, is predominantly a novel of ideas. Not about politics, foreign or domestic, but about philosophy, psychology and literature; the excitement of genetics and computer science edging towards their breakthrough. As before, Ms Byatt has to find a framework for all this thought: a book embedded in a book, a university seminar on body and mind, television discussion. As before, some of the talk invites a bit of skipping. But then the narrative resumes, pulling you along. It makes a fine conclusion to the quartet, leaving you properly thoughtful. “We haven't the slightest idea what to do,” says Frederica at the end. “We shall think of something,” says her lover.

A Whistling Woman.
By A. S. Byatt.
Chatto & Windus; 436 pages; £16.99. To be published in America by Knopf in December

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About sponsorship

Festival films

Petersburg magic and Rio gangs

Sep 19th 2002 | TELLURIDE, COLORADO
From The Economist print edition

A couple of gems from the festival of independent film at Telluride

CINEMA today is all too often just about plot or special effects. So films that are true to the medium, successfully weaving together sound, image and time to tell a really cinematic story are always special. On show at Telluride earlier this month were two remarkable examples.

Alexander Sokurov's “Russian Ark”, which opens in the United States in November, explores the 300-year-long history of the Hermitage museum in a single “breath”, an uncut 90-minute walk through 35 of its rooms and halls. This has never been done before, and the result is, among other things, a magical rumination on what film can achieve.

Tilman Büttner, the director of photography who operated the steadicam used to shoot the film, has turned the camera into one of its main characters, a contemporary film maker trapped in a journey through Russian history, with Mr Sokurov himself speaking its part. As we move from room to room an array of different scenes come up—Peter the Great whipping one of his generals, for example, or present-day visitors enjoying the works of art. The camera is invisible to the film's other characters, apart from a fellow time-traveller, a 19th-century French diplomat. The relationship between the camera and the diplomat, against the backdrop of some of Europe's greatest works of art, reveals the main theme of the film, Russia's uneasy link to its past and to Europe.

In contrast to the expanse of the subject, the film was shot in a single day, using almost 1,000 stage actors, hundreds of extras, two orchestras and 22 assistant directors. Cast and crew had not rehearsed together until production day. Yet they have turned out a seamless film. If the camera were to shake, Mr Büttner would lose his tight containment of the scene and the audience would remember the film maker's conceit. The dynamic between Mr Sokurov's lyrical movement through historical time and Mr Buttner's real-time movement of the camera creates the tension needed to sustain the long shot.

If Mr Sokurov chooses a single technique to tell a complex tale, then just as interesting is Fernando Meirelles's multi-tiered “City of God”, a film about gang violence during the 1960s and 1970s in Rio de Janeiro's *favela* of the same name. “City of God”, which will be released in January, is a fine example of Latin America's recent film renaissance. It was shot on location, using only natural lighting. The actors were mainly non-professional children from the *favelas*; the script was only there to suggest and guide the dialogue.

This naturalistic approach has echoes in the film's structure and tonal palette. Mr Meirelles divides the film into three parts. In the first, life is simple and crime relatively innocent. The compositions are ordinary, the angles conventional. The actors are given strict marks—literally, tape on the ground marking their positions—and the cinematography is warm. In part two, violence is on the rise, yet there is still a sense of freedom and possibility. Mr Meirelles uses more hand-held cameras as well as narrow lenses and bright Technicolor film to create a sense of excitement. The actors are given fewer marks and more freedom to improvise their lines. In the final third, chaos reigns and hope is dead. Mr Meirelles wanted to create the effect of losing control. The tone is monochromatic, the camera swings wildly and the actors have no marks at all.

Far from being a distraction, these aesthetic characteristics confirm just how good Mr Meirelles is at creating energy on screen. From the opening scene, cutting quickly between black screen, a knife being sharpened and people dancing, before the camera chases off after a chicken in the alleys of the *favela*, we know that we are in the hands of a serious creative talent.

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Film openings

Girl crazy

Sep 19th 2002 | LOS ANGELES
From The Economist print edition

No doubt about it, these girls will drive you nuts

STRANGE girls, whether genuine oddballs or digital holograms, are the theme of two new American films.

The Pygmalion myth gets a brainy workout in “S1m0ne”, written and directed by Andrew Niccol, who scripted “The Truman Show”, a media satire about a real person in a fabricated world. Here it is the reverse. S1m0ne (say it “Simone”) is a synthesp, a digital film star whose fractured monicker is short for “Simulation One”. She is the creation of a film director, Viktor (as in Frankenstein) Taransky, who has become fed up with the egomania of the authentic article. As Taransky is played by Al Pacino, the film's subtext is the confrontation between this flesh-and-blood wizard of method acting and his virtual Trilby, whom Rachel Roberts plays two-dimensionally—that is to say utterly believably.

You wicked synthesp, you

But trading in the real thing for a pliable fabrication doesn't solve his problems. When S1m0ne's cool beauty and mysterious aloofness drive audiences wild, she quickly eclipses her unhappy creator. To his horror he finds that he cannot turn her off, even though every word and gesture is his, mimicked and transposed by computer. Film historians can fill in real-life parallels, from Josef von Sternberg and Marlene Dietrich down to Alfred Hitchcock and Tippi Hedren. In truth, there is very little in “S1m0ne” that couldn't happen because most of it already has.

There is more girl trouble, though real this time, from Lee Holloway, the heroine of “Secretary”, an independent film from a debut director, Steven Shainberg, that won the top prize at the Sundance film festival last February. It gives a new twist to the screwball comedy, she being a masochist, he a sadist.

Lee, played by Maggie Gyllenhaal, answers a help-wanted ad placed by E. Edward Grey (James Spader), a lawyer who wants a bit more from his secretary than typing and answering the telephone. Lee, a suicide survivor who has kinks of her own, senses a kindred spirit when she sees Mr Gray's advertisement and energetically pursues correction by committing intentional typing errors.

The film has a fairytale glow because that is how the world looks to Lee once Mr Grey is there to dictate and impose. It's too bad this visual key is later forgotten when Mr Grey flees commitment, one improbability follows another and the film seems to be going to pieces.

Mr Spader nevertheless puts in a deft turn as Lee's reluctant Gilles de Rais, and “Secretary” is also blessed with an authentic screwball in Ms Gyllenhaal. Her remarkably expressive face morphs from

Rossetti to middle Picasso and back whenever some new off-kilter thought enters Lee's mind. If Hollywood can find the right roles for her and cuteness fatigue doesn't set in, hers will certainly be a career to watch.

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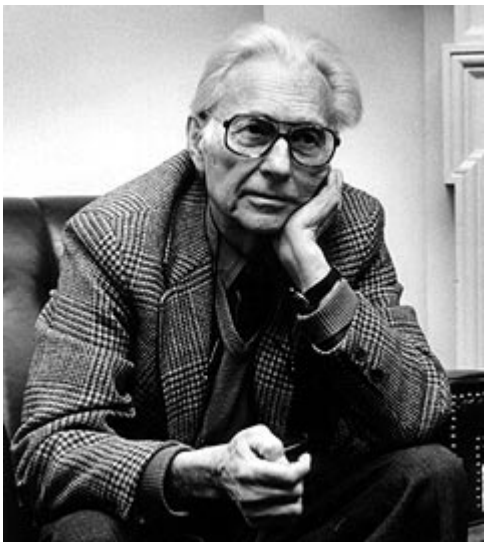
William Phillips

Sep 19th 2002
From The Economist print edition

William Phillips, a radical editor, died on September 13th, aged 94

Partisan Review



FOR more than 40 years William Phillips edited *Partisan Review*, a magazine of small circulation and little money but with a great deal of influence. Writers and commentators whose words later commanded audiences of millions first saw their names in print in a publication that might sell 15,000 copies if things were going well. Mary McCarthy, Bernard Malamud and Saul Bellow were apprentice contributors. European stars such as Jean-Paul Sartre and Albert Camus were introduced to American readers through the *Review*. The magazine was defending T.S. Eliot, Franz Kafka and James Joyce long before their acceptance as central to modern culture.

Magazines of modest means are being born continually wherever there is a computer, or even a typewriter: Canada, not the world's greatest literary centre, has nonetheless given birth to at least 18 poetry magazines in recent years. Mr Phillips, who called himself a “cocky kid driven by a grandiose idea”, provided evidence that a little magazine can even succeed. He could have joined what are sometimes called the “fat gods” of publishing. His skills of editing and spotting talent were very marketable. He must have been tempted to rescue himself from the slavery of a small business and join a publication where the pay was never late, where there were holidays and secretaries did the office chores.

Some innovative magazines started in a modest way have done well commercially, among them *Time* (started in 1923) and the *New Yorker* (1925). But the *Review* was started in 1934 partly as a rebellion against what Mr Phillips saw as slick, watered-down presentations of serious ideas in literature and politics. That kept him head-down at the *Review*, even if he had to answer the telephone himself, and he and his wife Edna had to do part-time teaching to pay the phone bill. If Mr Phillips and his partisans had anything in common with the *New Yorker* crowd, it was in their love of socialising.

Talk, talk, talk

The New Yorkers ate, drank and argued at the Algonquin Hotel; Mr Phillips preferred Stewart's Cafeteria in Greenwich Village, where you could get a good meal for 75 cents, a sound basis for hours of malicious gossip, or the conduct of love affairs, as well as for arguments about politics. In later life Mr Phillips said that he had “pissed my time away with talk”, talk of “sense and nonsense, idealism and cynicism”. Perhaps he did: he often complained of the artistic malady known as writer's block. On the other hand, there was the zest of “being in the midst of a community of so many talented, intelligent people”. The talk produced the polemic bite, the topical excitement that made the *Review* worth reading.

Mr Phillips's father was a lawyer from Odessa. Like many Jews tired of tsarist persecution he pulled up roots and came to New York to join a community that has probably done most to provide America with its culture. His son dropped the family name of Litvinsky for the blander one of Phillips. He had some formal education, including a course in literature at New York University, but like many in his circle, he was mostly self-taught. In “The Oasis” a novel by Mary McCarthy, she describes Philip Rahv, who helped Mr Phillips to start the *Review* and was for many years his co-editor: “Facts of any kind, oddities, lore, local history...Bohemian women, downtown bars, argument, subways, news-stands, the office...this was [what] he knew of the world.”

The *Review* was started with $800 collected by sending a hat round at a political meeting. Some who

chipped in their dollars believed that the magazine would take a communist line, favoured by many intellectuals at the time of the great Depression. But William Phillips and Philip Rahv were among the first on the left to acknowledge that liberty was being crushed in the Soviet Union, and the magazine attacked eminent commentators who, despite the evidence of those who had escaped from the Russian prison-state, were still “licking Stalin's boots”. They opposed isolationism in America: a notable essay by George Orwell gave warning of German expansionism under Hitler.

While sharing political views, the two men often quarrelled over what should go into the magazine, which was published first as a monthly and later as a hungry quarterly. They had a “bickering marriage”, said a friend. Rahv had fits of brilliance but had fits of depression too. William Phillips had the more balanced personality. What kept them together was their pampered child, the *Review.* The marriage lasted until 1969, when Rahv left to start his own magazine. He died in 1973.

It is difficult to say when Mr Phillips gave up editing. Perhaps he never did. In 1978, Edith Kurzweil, an academic, became joint editor of the *Review*. The couple were married in 1995 (Edna had died in 1985). Mr Phillips was 88 and still reading manuscripts. He said he remained a radical, but by then no one in America was much bothered about radicalism. The great debate between left and right had faded into gentle sparring between conservatives and liberals, and it was sometimes difficult to tell the difference. A melancholy William Phillips remarked in old age, “The future has not turned out so well.”

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Overview

Sep 19th 2002
From The Economist print edition

Global **stockmarkets** shuddered this week on worries about the faltering economic recovery and its impact on corporate profits. America's Dow Jones Industrial Average fell by 4.8% over the week. European markets were hit much harder: Frankfurt slumped by 13% to its lowest since February 1997; Paris fell by 12% and London by 8%. Tokyo alone bucked the trend, with a small gain over the week, after the Bank of Japan announced on September 18th that it planned to buy shares directly from banks. By helping banks to reduce their huge equity portfolios, the central bank hopes to shield them from further falls in the stockmarket, which hit a 19-year low earlier this month.

America's industrial production unexpectedly fell by 0.3% in the month of August, the first decline this year. As a result, capacity utilisation in American factories dropped to 76%. The trade deficit narrowed in July, which should help to boost third-quarter GDP growth. However, the 12-month deficit widened to $439 billion. America's overall current-account deficit rose to a record 5% of GDP in the second quarter.

Fears about Europe's wobbly recovery were ignited by news that **French** industrial production fell by 1% in July, leaving it down by 1.7% from a year ago. This follows last week's figures showing a similar fall of 1% in Germany in July. **Germany's** ZEW survey of business expectations fell in September to its lowest level in eight months.

Consumer-price inflation remains lower than a year ago everywhere in our table except Japan, where prices continue to fall. America's 12-month rate of consumer-price inflation rose to 1.8% in August, but largely because of a big jump in the prices of energy and tobacco. Britain's headline rate of inflation fell to 1.4% in the same month. The underlying rate, which strips out home-mortgage payments, fell to 1.9%, well below the Bank of England's 2.5% target.

Switzerland's GDP increased by 0.1% in the second quarter after four consecutive quarters of decline. With both inflation and interest rates well below 1%, many economists are worried that the country is moving dangerously close to deflation.

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Output, demand and jobs

Sep 19th 2002
From The Economist print edition

% change on year ago

	GDP		The Economist poll GDP forecasts		Industrial production	Retail sales (volume)	Unemployment % rate	
	1 qtr*	1 year	2002	2003	latest	latest	latest	year ago
Australia	+ 2.4	+ 3.8 Q2	+ 4.0	+ 3.7	+ 4.3 Q1	+ 6.3 Q2	6.2 Aug	6.8
Austria	+ 0.3	– 0.6 Q1	+ 0.9	+ 2.4	+ 2.5 Jun	– 0.2 May	4.2 Jul	3.6
Belgium	+ 0.8	+ 0.3 Q2	+ 1.1	+ 2.7	+ 3.8 Jul	– 4.2 Jun	12.0 Aug†	11.6
Britain	+ 2.4	+ 1.2 Q2	+ 1.7	+ 2.9	– 2.5 Jul	+ 5.0 Aug	5.2 Jul‡	5.1
Canada	+ 4.3	+ 3.2 Q2	+ 3.3	+ 3.4	+ 1.3 Jun	+ 6.3 Jun	7.5 Aug	7.3
Denmark	+ 4.4	+ 2.2 Q2	+ 1.6	+ 2.3	– 1.6 Jul	+ 4.1 Jun	5.1 Jul	5.1
France	+ 2.0	+ 1.0 Q2	+ 1.3	+ 2.6	– 1.7 Jul	+ 3.5 Aug	9.0 Jul††	8.7
Germany	+ 1.1	+ 0.1 Q2	+ 0.6	+ 2.2	– 2.0 Jul	– 1.7 Jul	9.9 Aug§	9.3
Italy	+ 0.9	+ 0.2 Q2	+ 0.8	+ 2.4	– 5.4 Jun	– 0.8 Jun	9.0 Apr	9.5
Japan	+ 2.6	– 0.7 Q2	– 0.5	+ 1.0	+ 3.3 Jul	– 4.8 Jul	5.4 Jul	5.0
Netherlands	+ 0.5	+ 0.1 Q2	+ 0.9	+ 2.4	– 3.0 Jun	– 2.1 May	2.3 Aug**	2.0
Spain	+ 1.8	+ 2.0 Q2	+ 2.0	+ 2.9	+ 1.8 Jul	na	11.3 Jul	10.6
Sweden	+ 2.4	+ 2.1 Q2	+ 1.8	+ 2.7	– 1.3 Jun	+ 4.7 Jul	4.3 Jul†	4.2
Switzerland	+ 0.4	– 0.4 Q2	+ 0.9	+ 2.2	– 8.8 Q1	+ 1.7 Jul	2.7 Aug†	1.7
United States	+ 1.1	+ 2.1 Q2	+ 2.5	+ 3.0	+ 0.4 Aug	+ 6.3 Jul	5.7 Aug	4.9
Euro area	+ 1.4	+ 0.6 Q2	+ 1.0	+ 2.4	– 1.2 Jun	– 0.9 Jun	8.3 Jul	8.0
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*							
Finland	+ 8.8	+ 2.5 Q2	na	na	+ 5.1 Jul	+ 2.7 May	8.1 Aug†	7.8
Greece	na	+ 4.0 Q2	na	na	+ 1.9 Jul	+ 9.9 Apr	na	na
Iceland	na	+ 3.1 2001	na	na	+ 3.3 2001	na	2.2 Aug†	1.1
Ireland	na	+ 2.9 Q1	na	na	+15.5 Jul	– 0.5 Jun	4.4 Aug	3.7
Luxembourg	na	+ 3.5 2001	na	na	+ 4.3 May	– 9.1 Apr	2.8 Jul†	2.4
New Zealand	+ 4.3	+ 4.0 Q1	na	na	+ 4.3 Q1	+ 8.3 Q2	5.1 Q2	5.3
Norway	+ 3.1	+ 1.7 Q2	na	na	+ 4.5 Jul	+ 2.5 Jul	3.8 Q2	3.6
Portugal	+ 1.4	+ 1.4 Q1	na	na	– 2.0 Jul	+ 0.9 Jul	4.5 Q2†	3.9

*% change at an annual rate. †Not seasonally adjusted. ‡May-July; claimant count rate 3.1% in Aug. §EU harmonised rate 8.3% in Aug. **Jun-Aug. ††Revised series.

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Prices and wages

Sep 19th 2002
From The Economist print edition

% change on year ago

	Consumer prices		The Economist poll consumer prices forecast		Producer prices		Wages/earnings	
	latest	year ago	2002	2003	latest	year ago	latest	year ago
Australia	+ 2.8 Q2	+ 6.0	+ 2.8	+ 2.5	– 1.1 Q2	+ 5.6	+ 3.7 Q2	+ 4.4
Austria	+ 1.9 Aug	+ 2.5	+ 1.7	+ 1.7	– 0.6 Aug	+ 1.7	+ 2.4 Jul	+ 2.8
Belgium	+ 1.3 Aug	+ 2.7	+ 1.7	+ 1.5	+ 0.8 Aug	– 1.0	+ 2.6 Q2	+ 2.6
Britain	+ 1.4 Aug	+ 2.1	+ 1.9	+ 2.4	+ 0.3 Aug	+ 0.2	+ 4.0 Jul	+ 4.6
Canada	+ 2.1 Jul	+ 2.6	+ 1.8	+ 2.2	– 0.3 Jul	+ 0.8	+ 3.0 Jun	+ 1.5
Denmark	+ 2.3 Aug	+ 2.5	+ 2.3	+ 2.0	– 0.3 Aug	+ 1.5	+ 3.7 Q2	+ 4.7
France	+ 1.8 Aug	+ 1.9	+ 1.8	+ 1.4	– 1.5 Jun	+ 2.3	+ 3.8 Q2	+ 4.2
Germany	+ 1.1 Aug	+ 2.6	+ 1.4	+ 1.2	– 0.5 Aug	+ 1.5	+ 2.5 Jun	+ 1.9
Italy	+ 2.4 Aug	+ 2.8	+ 2.3	+ 1.8	+ 0.1 Jul	+ 1.3	+ 2.2 Jul	+ 2.5
Japan	– 0.8 Jul	– 0.8	– 0.9	– 0.5	– 1.3 Aug	nil	– 5.6 Jul	+ 0.7
Netherlands	+ 3.3 Aug	+ 4.7	+ 3.6	+ 2.4	– 0.4 Jul	+ 2.4	+ 3.0 Jul	+ 5.1
Spain	+ 3.6 Aug	+ 3.7	+ 3.3	+ 2.6	+ 0.6 Jul	+ 2.0	+ 4.0 Q1	+ 3.4
Sweden	+ 2.0 Aug	+ 3.1	+ 2.3	+ 2.0	– 0.8 Jul	+ 2.1	+ 2.9 Jun	+ 2.8
Switzerland	+ 0.5 Aug	+ 1.1	+ 1.0	+ 1.2	– 1.4 Aug	– 0.2	+ 2.5 2001	+ 1.3
United States	+ 1.8 Aug	+ 2.7	+ 1.6	+ 2.2	– 1.6 Aug	+ 2.0	+ 3.1 Aug	+ 4.1
Euro area	+ 2.1 Aug	+ 2.7	+ 2.1	+ 1.6	– 0.6 Jul	+ 2.1	+ 3.3 Q1	+ 2.8
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*							
Finland	+ 1.4 Aug	+ 2.6	na	na	– 1.8 Aug	– 0.1	+ 3.8 Q2	+ 4.9
Greece	+ 3.5 Aug	+ 3.8	na	na	+ 0.7 Jul	+ 4.5	na	na
Iceland	+ 3.1 Sep	+ 8.4	na	na	+ 6.2 Aug	+ 6.9	+ 6.6 Jul	+ 8.1
Ireland	+ 4.5 Aug	+ 4.6	na	na	– 3.0 Jul	+ 4.5	+ 8.9 Q1	+ 7.4
Luxembourg	+ 1.8 Aug	+ 2.8	na	na	– 1.0 Jul	+ 0.6	+ 0.9 May	+ 2.7
New Zealand	+ 2.8 Q2	+ 3.2	na	na	+ 1.5 Q2	+ 8.1	+ 2.1 Q2	+ 1.8
Norway	+ 1.4 Aug	+ 2.7	na	na	– 8.6 Aug	– 4.3	+ 4.9 Q2	+ 4.4
Portugal	+ 3.7 Aug	+ 4.0	na	na	– 3.5 Jul	+ 1.3	– 0.2 Jun	– 0.6

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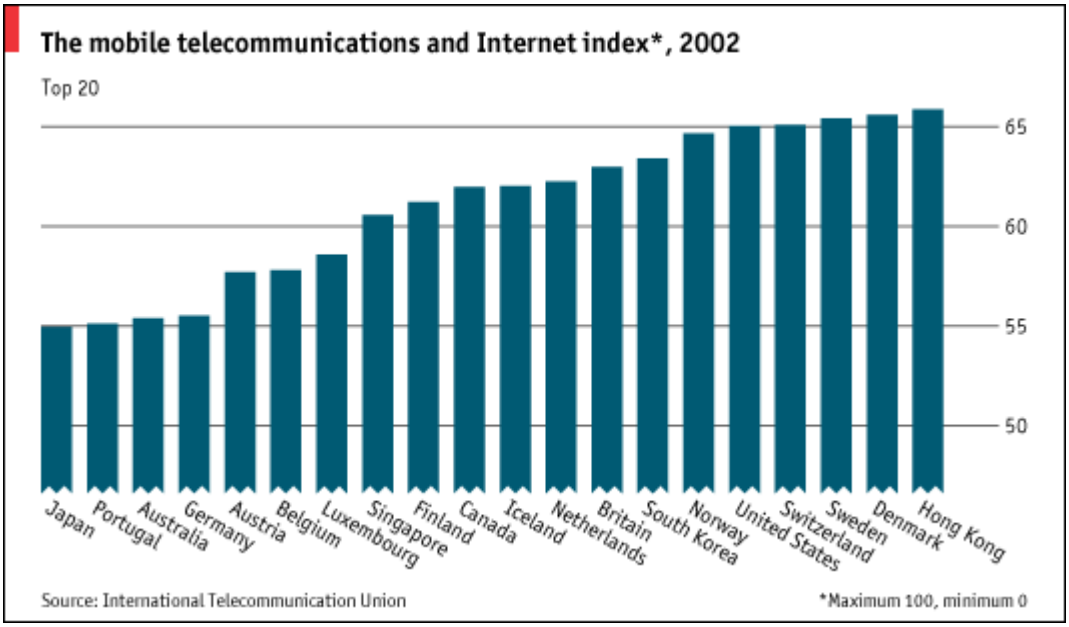
International Telecommunication Union

Sep 19th 2002
From The Economist print edition



In a new report, the International Telecommunication Union (ITU) ranks more than 200 economies according to their performance in mobile telecommunications and Internet technologies, as well as their ability to take advantage of future developments in these fields. In all, 26 indicators covering the quality and extent of network infrastructure, network usage and market conditions were used to construct the ITU's index.

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Money and interest rates

Sep 19th 2002
From The Economist print edition

	Money supply* % change on year ago			Interest rates % p.a. (Sep 18th 2002)					
				3-mth money market		2-year	10-year gov't bonds		corporate
	narrow	broad		latest	year ago	gov't bonds	latest	year ago	bonds
Australia	– 4.1	+ 9.4	Jul	4.95	4.38	4.99	5.47	5.56	6.73
Britain	+ 8.6	+ 5.8	Aug	3.94	4.56	3.71	4.41	4.88	5.64
Canada	+17.2	+ 7.2	Jul	2.82	3.18	3.41	4.86	5.23	6.85
Denmark	+ 6.2	+10.2	Jul	3.40	4.13	3.61	4.54	5.05	6.85
Japan	+31.5	+ 3.5	Aug	0.02	0.01	0.00	1.22	1.37	1.13
Sweden	+ 2.2	+ 4.2	Jun	4.13	3.73	4.32	4.81	5.14	4.80
Switzerland	+12.0	+ 5.8	Aug	0.73	2.75	0.63	2.51	3.20	3.75
United States	+ 3.2	+ 8.3	Aug	1.75	2.76	2.01	3.85	4.69	6.25
Euro area†	+ 7.6	+ 7.1	Jul	3.31	3.76	3.18	4.29	4.76	5.13

*Narrow: M1 except Britain and Sweden M0, broad: M2 or M3 except Britain M4. †Germany for bonds. Benchmarks: US 30-year 4.74%, Japan No.241 1.23%. Central bank rates: US fed funds 1.75%, ECB refinancing 3.25%, BOJ overnight call 0.002%, BOE repo 4.00%. Sources: Commerzbank, Danske Bank, J.P. Morgan Chase, Royal Bank of Canada, Stockholmsbörsen, UBS Warburg, DRI-WEFA, Westpac, Thomson Datastream. Rates cannot be construed as banks' offers.

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The Economist commodity price index

Sep 19th 2002
From The Economist print edition

1995=100

	Sep 10th	Sep 17th*	% change on one month	% change on one year
Dollar index				
All items	76.5	75.5	+ 3.9	+13.3
Food	81.9	81.5	+ 7.3	+18.9
Industrials				
All	69.0	67.5	– 1.3	+ 5.2
Nfa†	71.3	69.3	– 3.2	+10.2
Metals	67.1	65.9	+ 0.6	+ 1.0
Sterling index				
All items	77.7	77.6	+ 3.3	+ 7.9
Euro index				
All items	103.2	102.5	+ 4.6	+ 7.8
Yen index				
All items	97.4	98.4	+ 6.9	+18.2
Gold				
$ per oz	318.20	316.60	+ 2.6	+10.1
West Texas Intermediate				
$ per barrel	29.64	29.11	– 2.4	+ 4.9

* Provisional. † Non-food agriculturals.

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Stockmarkets

Sep 19th 2002
From The Economist print edition

Market indices

	Sep 18th	2002 high	2002 low	% change on one week	% change on record high	% change on Dec 31st 2001 in local currency	% change on Dec 31st 2001 in $ terms
Australia (All Ordinaries)	3,070.7	3,440.0	2,937.8	– 0.9	–10.7	– 8.6	– 2.2
Austria (ATX)	1,090.3	1,357.2	1,090.3	– 3.7	–37.2	– 4.4	+ 5.0
Belgium (Bel 20)	2,015.0	2,899.8	2,001.6	–10.9	–45.3	–27.6	–20.5
Britain (FTSE 100)	3,865.4	5,323.8	3,777.1	– 8.2	–44.2	–25.9	–21.1
Canada (Toronto Composite)	6,304.8	7,958.1	6,161.1	– 4.7	–44.6	–18.0	–17.4
Denmark (KBX)	172.5	233.4	169.0	– 7.8	–42.8	–23.3	–15.7
France (SBF 250)	2,038.3	3,081.9	2,038.3	–10.3	–53.6	–31.6	–24.9
(CAC 40)	3,001.0	4,688.0	3,001.0	–11.7	–56.6	–35.1	–28.8
Germany (Xetra DAX)	3,124.9	5,462.6	3,124.9	–12.8	–61.3	–39.4	–33.5
Italy (BCI)	1,101.4	1,513.0	1,077.8	– 6.1	–49.5	–23.2	–15.6
Japan (Nikkei 225)	9,472.1	11,979.9	9,075.1	+ 0.8	–75.7	–10.2	– 3.1
(Topix)	927.8	1,139.4	886.4	+ 1.2	–67.8	–10.1	– 3.0
Netherlands (AEX)	316.1	531.2	316.1	–14.0	–55.0	–37.6	–31.5
Spain (Madrid SE)	622.7	848.1	622.7	– 7.7	–45.7	–24.5	–17.1
Sweden (Affarsvarlden Gen)	142.0	236.8	142.0	– 7.8	–64.5	–38.6	–30.9
Switzerland (Swiss Market)	4,814.5	6,694.1	4,607.8	– 8.3	–42.8	–25.0	–17.0
United States (DJIA)	8,172.5	10,635.3	7,702.3	– 4.8	–30.3	–18.5	–18.5
(S&P 500)	869.5	1,172.5	797.7	– 4.4	–43.1	–24.3	–24.3
(Nasdaq Comp)	1,252.1	2,059.4	1,206.0	– 4.8	–75.2	–35.8	–35.8
Europe (FTSE Eurotop 300)*	863.6	1,279.7	862.3	– 9.9	–49.4	–31.5	–24.8
Euro area (FTSE Ebloc 100)*	713.9	1,125.1	713.9	–11.8	–54.0	–35.8	–29.5
World (MSCI)†	777.5	1,024.4	756.7	– 5.4	–46.3	na	–22.5
World bond market (Salomon)‡	496.4	504.2	430.3	+ 0.5	– 1.5	na	+12.9

*In euro terms. †Morgan Stanley Capital International index includes individual markets listed above plus eight others, in dollar terms.
‡Salomon Smith Barney World Government Bond Index, total return, in $ terms.

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Trade, exchange rates and budgets

Sep 19th 2002
From The Economist print edition

	Trade balance*, $bn latest 12 months		Current account $bn latest 12 mths		The Economist poll % of GDP, forecast 2002	2003	Exchange rate trade-weighted† Sep 18th	year ago	Currency units per $ Sep 18th	year ago	per £	per euro	per ¥100	Budget balance % of GDP 2002‡
Australia	− 1.3	Jul	− 11.6	Q2	− 3.7	− 3.8	73.6	67.6	1.83	2.02	2.83	1.78	1.50	0.1
Austria	− 1.4	Jun	− 0.9	Jul	− 2.2	− 1.9	na	100.5	1.02	1.08	1.58	–	0.84	-0.3
Belgium	+ 15.1	Jun	+ 11.8	Mar§	+ 5.0	+ 5.1	na	99.5	1.02	1.08	1.58	–	0.84	nil
Britain	− 44.9	Jul	− 31.2	Q1	− 2.1	− 1.9	106.3	104.7	0.65	0.68	–	0.63	0.53	-0.8
Canada	+ 34.3	Jul	+ 12.1	Q2	+ 2.1	+ 2.2	75.0	76.2	1.59	1.57	2.46	1.55	1.31	1.0
Denmark	+ 7.1	Jul	+ 3.3	Jul	+ 1.9	+ 1.8	102.8	103.2	7.60	8.01	11.8	7.43	6.26	2.2
France	+ 10.2	Jul	+ 27.3	Jul	+ 1.7	+ 1.6	na	102.2	1.02	1.08	1.58	–	0.84	-2.0
Germany	+104.5	Jul	+ 30.2	Jul	+ 1.2	+ 1.0	na	99.2	1.02	1.08	1.58	–	0.84	-2.8
Italy	+ 9.8	Jun	− 3.2	Jun	− 0.1	− 0.0	na	72.9	1.02	1.08	1.58	–	0.84	-1.4
Japan	+ 83.8	Jul	+110.9	Jul	+ 2.9	+ 2.9	133.6	141.8	121	117	188	119	–	-8.0
Netherlands	+ 25.0	Jul	+ 2.7	Q2	+ 3.9	+ 4.0	na	98.5	1.02	1.08	1.58	–	0.84	0.1
Spain	− 36.4	Jun	− 15.3	Jun	− 2.1	− 1.8	na	74.6	1.02	1.08	1.58	–	0.84	-0.3
Sweden	+ 14.7	Jul	+ 8.1	Jul	+ 3.2	+ 3.2	77.6	72.3	9.32	10.5	14.4	9.11	7.67	2.1
Switzerland	+ 3.5	Aug	+ 25.7	Q1	+10.0	+10.2	114.1	112.2	1.50	1.59	2.33	1.47	1.24	na
United States	−438.5	Jul	−428.8	Q2	− 4.5	− 4.1	114.6	115.6	–	–	1.55	0.98	0.82	-1.0
Euro area	+ 79.2	Jun	+ 24.8	Jun	+ 0.5	+ 0.5	81.5	80.1	1.02	1.08	1.58	–	0.84	-1.5
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*													
Finland	+ 12.7	Jul	+ 8.7	Jul	na	na	na	79.3	1.02	1.08	1.58	–	0.84	3.2
Greece	− 18.8	Mar	− 7.6	Jun	na	na	na	57.7	1.02	1.08	1.58	–	0.84	0.4
Iceland	+ 0.1	Jul	− 0.2	Q1	na	na	na	na	88.3	99.4	137	86.3	72.7	-0.5
Ireland	+ 33.5	Jun	− 0.4	Q1	na	na	na	88.4	1.02	1.08	1.58	–	0.84	0.1
Luxembourg	− 2.7	Jun	+ 1.7	Q1	na	na	na	99.5	1.02	1.08	1.58	–	0.84	2.2
New Zealand	+ 0.1	Jul	− 1.2	Q1	na	na	86.2	77.2	2.13	2.43	3.30	2.08	1.75	0.1
Norway	+ 24.5	Aug	+ 26.1	Jun	na	na	105.6	98.0	7.51	8.54	11.6	7.34	6.18	14.0
Portugal	− 12.6	Jun	− 9.5	Jun	na	na	na	89.8	1.02	1.08	1.58	–	0.84	-2.4

*Merchandise. Australia, Britain, France, Canada, Japan and United States imports fob, exports fob. All others cif/fob. †1990=100, Bank of England. ‡OECD forecast. §New series.

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Overview

Sep 19th 2002
From The Economist print edition

Many analysts feared that **China's** economy would slow in the second half of 2002, after growing at an annual rate of 7.8% during the first six months of the year. But, so far, fears that exports (a good indicator of China's economic growth) would drop have proven unfounded. In the year to August, exports rose by 25%; industrial production rose by 12.7%. In other good news, consumer-price deflation eased slightly.

Inflation, not deflation, is becoming a problem for **South Africa**. Consumer prices rose by 11.6% in the year to August, the highest rate of inflation since 1992.

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Foreign direct investment

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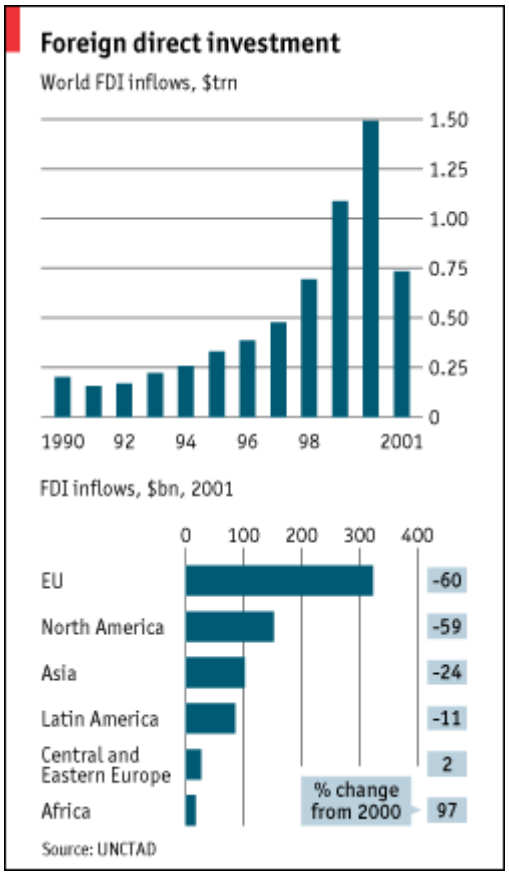
After reaching record levels in 2000, foreign direct investment (FDI) declined sharply in 2001. The slump was concentrated in the world's rich countries, where the frantic pace of cross-border mergers and acquisitions flagged after years of growth. FDI flows to the European Union shrank by 60%, while North America's inflows slowed by 59%. FDI into Africa almost doubled, although from a modest base, rising from $9 billion in 2000 to over $17 billion in 2001. But most of this investment was concentrated in a few big projects in South Africa and Morocco. In the emerging markets, Argentina, Brazil and Hong Kong suffered a combined $57 billion decline in inbound FDI. In 2001, America continued to attract more FDI than any other country; it also invested the most abroad of any country.



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Economy

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	% change on year ago						Latest 12 months, $bn				Foreign reserves* $bn, latest	
	GDP		Industrial production		Consumer prices		Trade balance		Current account			
China	+ 8.0	Q2	+12.7	Aug	– 0.7	Aug	+29.1	Aug	+17.4	2001	246.8	Jun
Hong Kong	+ 0.5	Q2	–11.6	Q1	– 3.4	Jul	– 8.2	Jul	+14.1	Q1	112.3	Aug
India	+ 6.4	Q1	+ 6.4	Jul	+ 3.9	Jul	– 5.1	Jul	+ 1.4	Q1	58.3	Aug
Indonesia	+ 3.5	Q2	– 9.4	Q4	+10.6	Aug	+27.3	Jul	+ 6.1	Q1	29.5	Jul
Malaysia	+ 3.8	Q2	+ 6.9	Jul	+ 2.1	Aug	+13.4	Jul	+ 7.0	Q1	32.8	Jul
Philippines	+ 4.5	Q2	+ 5.9	Jun	+ 2.9	Aug	+ 2.8	Jul	+ 6.2	May	13.4	Aug
Singapore	+ 3.9	Q2	+17.8	Jul	– 0.4	Jul	+ 6.4	Jul	+17.5	Q2	80.9	Aug
South Korea	+ 6.3	Q2	+ 8.9	Jul	+ 2.4	Aug	+ 9.8	Aug	+ 5.3	Jul	115.4	Jul
Taiwan	+ 3.0	Q2	+11.4	Jul	– 0.3	Aug	+18.6	Aug	+24.8	Q2	155.3	Jul
Thailand	+ 5.1	Q2	+ 9.6	Jul	+ 0.3	Aug	+ 3.8	Jul	+ 6.5	Jul	37.0	Jul
Argentina	–16.3	Q1	– 9.6	Aug	+36.5	Aug	+13.4	Jul	nil	Q1	9.0	Jul
Brazil	+ 1.0	Q2	+ 3.3	Jul	+ 7.5	Aug	+ 7.4	Aug	–16.7	Jul	39.1	Jul
Chile	+ 1.7	Q2	+ 8.6	Jul	+ 2.2	Aug	+ 2.4	Aug	– 0.6	Q2	15.0	Jul
Colombia	+ 2.2	Q2	– 1.2	Jun	+ 6.0	Aug	+ 0.5	Jun	– 1.4	Q1	10.6	Jul
Mexico	+ 2.1	Q2	+ 1.9	Jul	+ 5.3	Aug	– 9.1	Jul	–16.3	Q2	46.1	Jul
Peru	+ 3.8	Jul	+ 6.8	Jul	+ 0.1	Aug	+ 0.2	Jul	– 1.0	Q2	9.2	Jul
Venezuela	– 9.9	Q2	–17.1	Jun	+24.0	Aug	+ 8.5	Q2	+ 1.9	Q2	7.6	Jun
Egypt	+ 4.9	2001†	+ 7.8	2001†	+ 2.7	Jun	– 8.2	Apr	– 0.1	Q1	12.6	May
Israel	– 1.7	Q2	+ 1.6	Jun	+ 6.2	Aug	– 6.3	Jul	– 2.3	Q1	24.5	Aug
South Africa	+ 2.2	Q2	+ 7.8	Jul	+11.6	Aug	+ 3.1	Jul	– 0.3	Q2	6.0	Jul
Turkey	+ 2.3	Q1	+12.3	Jul	+40.2	Aug	–10.3	Jun	+ 2.0	Jun	23.2	Jul
Czech Republic	+ 2.5	Q2	+10.8	Jul	+ 0.6	Aug	– 2.5	Jun	– 2.3	Q2	21.6	Aug
Hungary	+ 3.1	Q2	+ 5.1	Jul	+ 4.5	Aug	– 2.4	Jul	– 2.1	Jul	10.3	Jul
Poland	+ 0.5	Q1	+ 6.0	Jul	+ 1.2	Aug	–10.4	Jul	– 6.4	Jul	27.1	Jul
Russia	+ 4.1	Q2	+ 3.4	Aug	+15.2	Aug	+42.4	Jul	+28.3	Q2	40.6	Aug
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*											
Pakistan	+ 3.3	2001†	+21.3	Apr	+ 4.4	Jun	– 1.1	Aug	+ 0.3	2001†	4.8	Jun
Saudi Arabia	+ 1.2	2001	na		– 0.2	Apr	+44.1	2001	+14.5	2001	18.1	Jul

*Excluding gold, except Singapore; IMF definition. †Year ending June.

Text refers only to the first 25 countries listed

Sources: National statistics offices, central banks and stock exchanges; Thomson Financial Datastream; Economist Intelligence Unit; Reuters; Warburg Dillon Read; J.P Morgan Chase; Hong Kong Monetary Authority; Centre for Monitoring Indian Economy; FIEL; EFG-Hermes; Bank Leumi Le-Israel; Standard Bank Group; Garanti Bank; Deutsche Bank; *Russian Economic Trends*.

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Financial markets

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	Currency units			Interest rates	Stockmarkets	% change on		
	per $		per £	short-term	Sep 18th		Dec 31st 2001	
	Sep 18th	year ago	Sep 18th	% p.a.		one week	in local currency	in $ terms
China	8.27	8.28	12.8	na	1,664.1	– 1.6	– 2.8	– 2.7
Hong Kong	7.80	7.80	12.1	1.88	9,474.1	– 4.1	– 16.9	– 16.9
India	48.4	48.0	75.0	5.72	3,069.8	– 1.8	– 5.9	– 6.2
Indonesia	9,000	9,605	13,944	14.50	419.1	– 2.6	+ 6.9	+ 23.5
Malaysia	3.80	3.80	5.89	3.20	677.2	– 1.8	– 2.7	– 2.7
Philippines	52.3	51.4	81.0	6.75	1,153.3	– 0.0	– 1.3	– 2.6
Singapore	1.77	1.74	2.75	1.19	1,431.3	– 1.2	– 11.8	– 8.2
South Korea	1,208	1,297	1,872	4.82	703.9	– 2.9	+ 1.5	+ 10.3
Taiwan	34.6	34.6	53.7	2.10	4,482.7	– 3.8	– 19.2	– 18.4
Thailand	42.9	44.2	66.5	2.00	354.0	– 2.0	+ 16.5	+ 20.0
Argentina	3.63	1.00	5.62	39.10	378.0	– 2.1	+ 28.0	– 64.7
Brazil	3.35	2.71	5.19	17.90	9,505.4	– 6.6	– 30.0	– 51.7
Chile	730	691	1,131	2.64	4,843.2	– 1.3	– 10.3	– 18.8
Colombia	2,788	2,343	4,320	7.96	1,202.7	+ 0.0	+ 12.3	– 8.3
Mexico	10.02	9.40	15.5	6.99	5,960.4	– 4.8	– 6.5	– 14.4
Peru	3.60	3.49	5.58	4.27	1,162.3	– 1.8	– 1.1	– 5.4
Venezuela	1,450	743	2,246	29.90	7,390.9	+ 2.7	+ 12.5	– 41.2
Egypt	4.64	4.26	7.18	7.13	5,291.7	+ 1.0	+ 0.4	– 1.0
Israel	4.79	4.32	7.41	6.40	354.9	– 2.2	– 20.6	– 26.8
South Africa	10.6	8.64	16.4	13.05	9,582.1	– 3.6	– 8.2	+ 4.0
Turkey	1,667,750	1,504,000	2,583,845	42.00	9,257.5	– 0.1	– 32.8	– 41.4
Czech Republic	31.0	37.0	48.0	3.00	445.1	– 1.9	+ 12.8	+ 29.6
Hungary	249	278	386	9.69	7,438.7	– 2.5	+ 4.3	+ 15.1
Poland	4.16	4.20	6.44	7.94	13,063.7	– 2.6	– 6.2	– 10.8
Russia	31.7	29.5	49.1	21.00	329.8‡	– 4.9	+ 31.7	+ 26.8
EMF (MSCI)*	1.00	1.00	1.55	na	284.6	– 4.4	na	– 10.3
EMBI+†	1.00	1.00	1.55	na	204.4	– 1.8	na	+ 2.0

*Emerging Mkts Free. †J.P. Morgan Chase's Emerging Mkts Bond Index Plus. ‡ In $ terms.

Sources: National statistics offices, central banks and stock exchanges; Thomson Financial Datastream; Economist Intelligence Unit; Reuters; Warburg Dillon Read; J.P Morgan Chase; Hong Kong Monetary Authority; Centre for Monitoring Indian Economy; FIEL; EFG-Hermes; Bank Leumi Le-Israel; Standard Bank Group; Garanti Bank; Deutsche Bank; *Russian Economic Trends*.

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